New York State Testing Program

2025

Mathematics Test

Grade 5

Scoring Leader Materials

Training Set

QAI30277

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]

Grade 5 Mathematics Reference Sheet

CONVERSIONS

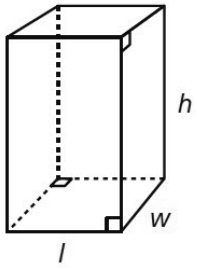
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 liter = 1,000 milliliters

1 pound = 16 ounces
1 ton = 2,000 pounds
1 kilogram = 1,000 grams

FORMULAS AND FIGURES

Right Rectangular Prism



$V = l \times w \times h$
$V = B \times h$

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

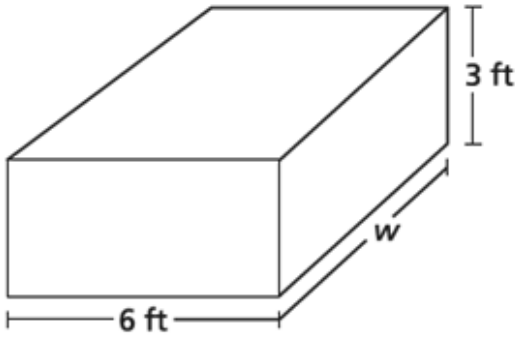
1. The student is **not** required to show work for a 1-credit constructed-response question, therefore, any work shown will **not** be scored. A clearly identified correct response should still receive full credit.
2. If the student clearly identifies a correct answer but fails to write that answer 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.

36

A right rectangular prism is shown below.



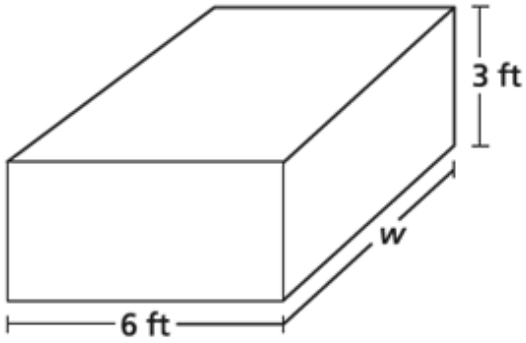
The volume of the prism is 90 cubic feet. What is the width, w, in feet, of the prism?

Answer $w =$ _____ feet

EXEMPLARY RESPONSE

36

A right rectangular prism is shown below.



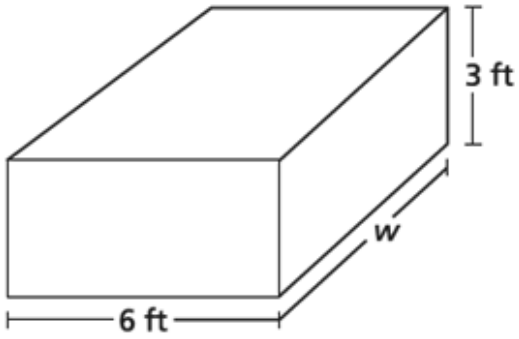
The volume of the prism is 90 cubic feet. What is the width, *w*, in feet, of the prism?

Answer $w =$ 5 feet

GUIDE PAPER 1

36

A right rectangular prism is shown below.



The volume of the prism is 90 cubic feet. What is the width, *w*, in feet, of the prism?

Answer $w =$ V= 6 x W x 3
6x3 = 18 ft
90 ÷ 18 = 5 ft
W = 5 ft feet

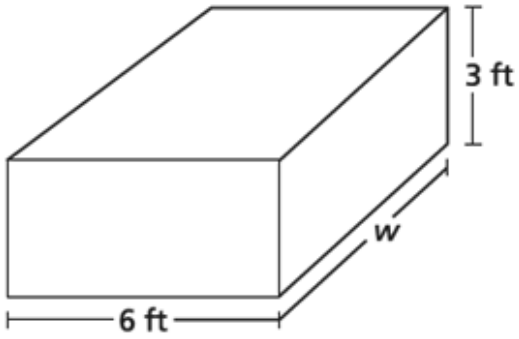
Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

36

A right rectangular prism is shown below.



The volume of the prism is 90 cubic feet. What is the width, w, in feet, of the prism?

Answer $w =$ 5 feet

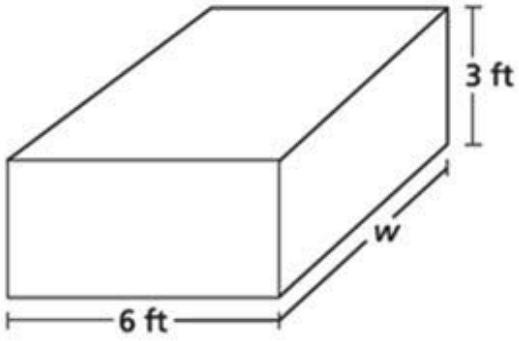
Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 3

36

A right rectangular prism is shown below.



The volume of the prism is 90 cubic feet. What is the width, *w*, in feet, of the prism?

Answer $w =$ 6 × 3 = 18 × 5 = 90 feet

Score Credit 0 (out of 1 credit)

The answer is not clearly identified.

37

Last week, Nancy hiked $7\frac{3}{4}$ miles. This week, she swam $\frac{2}{3}$ the distance she hiked last week.

How many miles did Nancy swim this week?

Answer _____ miles

EXEMPLARY RESPONSE

37

Last week, Nancy hiked $7\frac{3}{4}$ miles. This week, she swam $\frac{2}{3}$ the distance she hiked last week.

How many miles did Nancy swim this week?

Answer $\underbrace{5\frac{1}{6} \; OR \; \frac{31}{6}}_{OR \; Equivalent}$ miles

GUIDE PAPER 1

37

Last week, Nancy hiked $7\frac{3}{4}$ miles. This week, she swam $\frac{2}{3}$ the distance she hiked last week.

How many miles did Nancy swim this week?

Answer $7\frac{3}{4} \times \frac{2}{3} = 5\frac{2}{12}$ miles

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

37

Last week, Nancy hiked $7\frac{3}{4}$ miles. This week, she swam $\frac{2}{3}$ the distance she hiked last week.

How many miles did Nancy swim this week?

Answer $5\frac{1}{6}$ miles

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 3

37

Last week, Nancy hiked $7\frac{3}{4}$ miles. This week, she swam $\frac{2}{3}$ the distance she hiked last week.

How many miles did Nancy swim this week?

Answer $\frac{34}{6}$ miles

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

38

Leia has 5 pounds of chocolate that she will put into bags. She puts $\frac{1}{3}$ pound of the chocolate into each bag. Into how many bags does Leia put the chocolate?

Answer _____ bags

EXEMPLARY RESPONSE

38

Leia has 5 pounds of chocolate that she will put into bags. She puts $\frac{1}{3}$ pound of the chocolate into each bag. Into how many bags does Leia put the chocolate?

Answer 15 bags

GUIDE PAPER 1

38

Leia has 5 pounds of chocolate that she will put into bags. She puts $\frac{1}{3}$ pound of the chocolate into each bag. Into how many bags does Leia put the chocolate?

Answer $5 \div \frac{1}{3} = 15$

She puts chocolate into 15 bags.

bags

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

38

Leia has 5 pounds of chocolate that she will put into bags. She puts $\frac{1}{3}$ pound of the chocolate into each bag. Into how many bags does Leia put the chocolate?

Answer 15 bags

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 3

38

Leia has 5 pounds of chocolate that she will put into bags. She puts $\frac{1}{3}$ pound of the chocolate into each bag. Into how many bags does Leia put the chocolate?

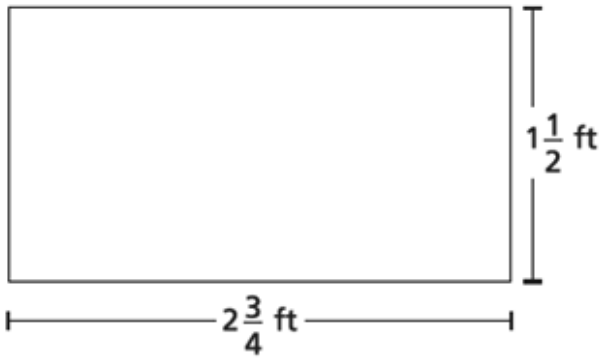
Answer $5 \div \frac{1}{3} = \frac{1}{15}$ bags

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

39

A diagram of a rectangle with given dimensions is shown below.



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

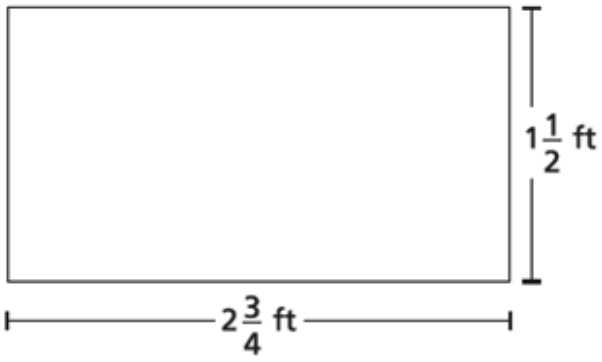
Show your work.

Answer _____ square feet

EXEMPLARY RESPONSE

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$$1\frac{1}{2} \times 2\frac{3}{4}$$

$$= \frac{3}{2} \times \frac{11}{4}$$

$$= \frac{33}{8} \ \textit{OR} \ 4\frac{1}{8} \text{ square feet}$$

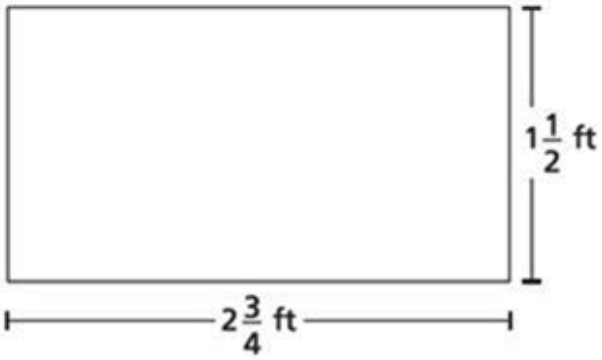
OR Other valid process

Answer $\frac{33}{8}$ *OR* $4\frac{1}{8}$ square feet

OR Equivalent

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$$2\frac{3}{4} \times 1\frac{1}{2} =$$

$$\frac{11}{4} \times \frac{3}{2} = \frac{33}{8} = 4\frac{1}{8}$$

Answer $4\frac{1}{8}$ square feet

Score Credit 2 (out of 2 credits)

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

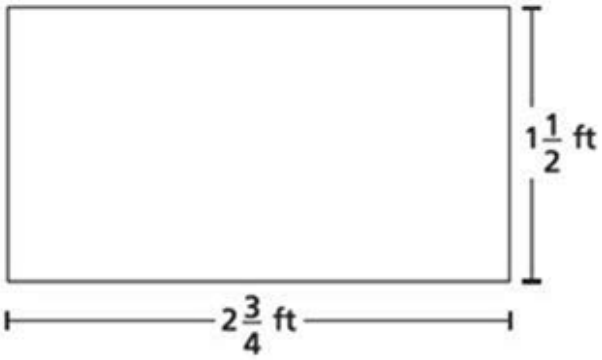
- The area of the rectangle is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 2

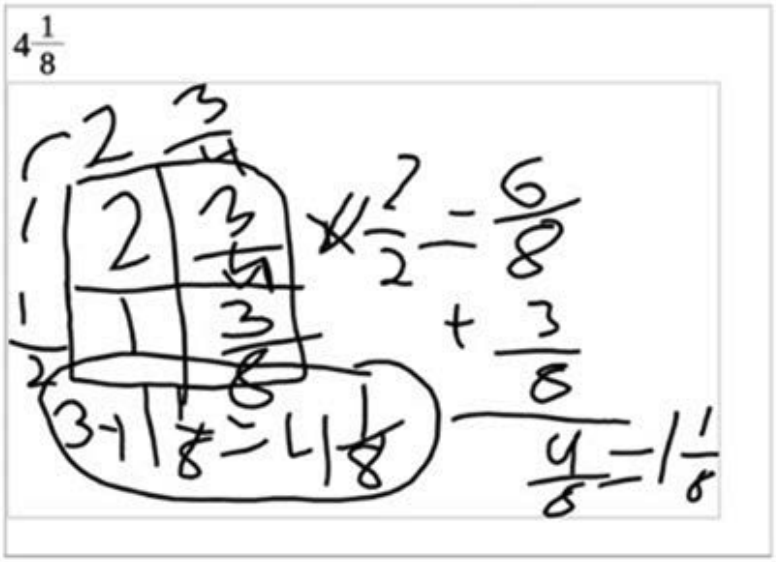
39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.



Answer 4 1/8 square feet

Score Credit 2 (out of 2 credits)

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

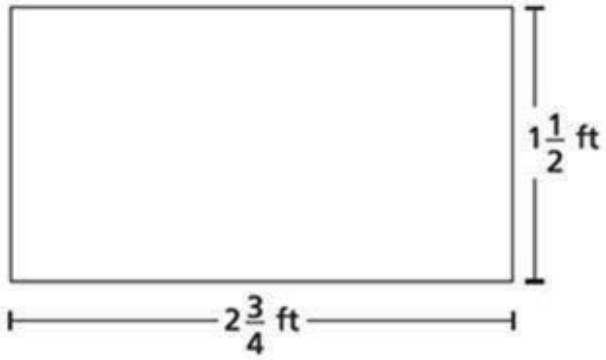
- The area of the rectangle is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 3

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$$\frac{11}{4} \times \frac{3}{2} = \frac{33}{8}$$

Answer $\frac{33}{8}$ square feet

Score Credit 2 (out of 2 credits)

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

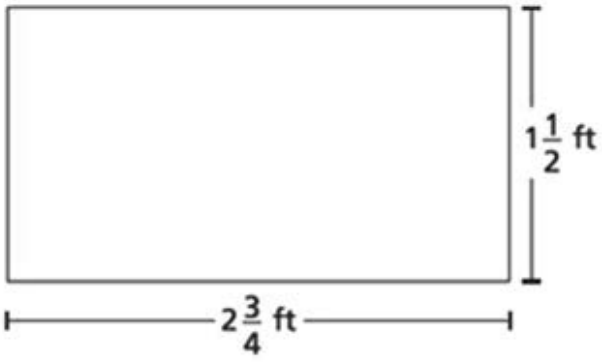
- The area of the rectangle is correctly determined using sound procedures.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$2\frac{3}{4} \times 1\frac{1}{2} = 4\frac{1}{8}$

Answer The area in square feet is $4\frac{1}{8}$. square feet

Score Credit 1 (out of 2 credits)

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

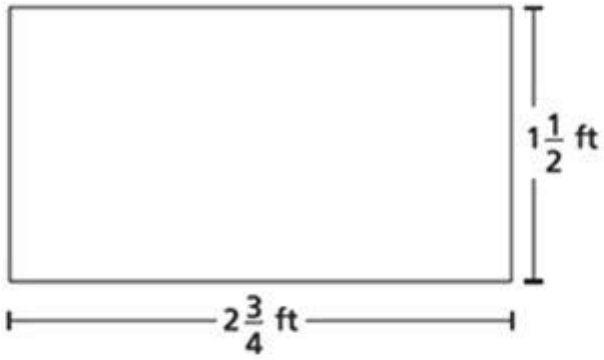
- Although a correct expression is written to determine the area of the rectangle and a correct solution is provided, it is not clear from the work how the solution is obtained.

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

GUIDE PAPER 5

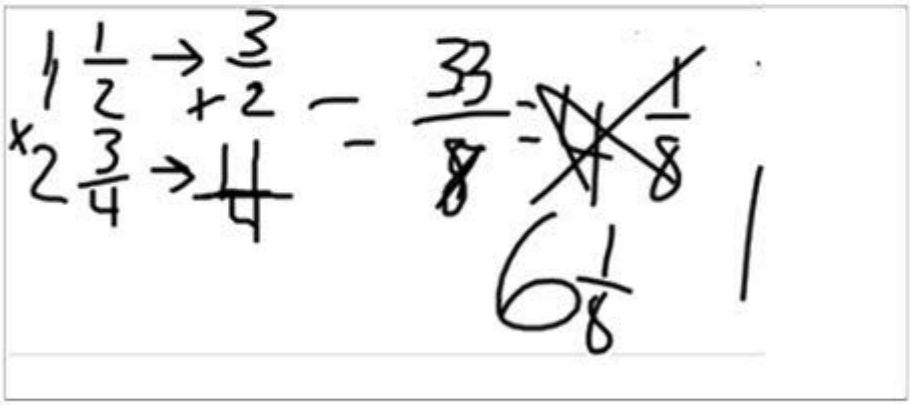
39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.



Answer $6\frac{1}{4}$ square feet

Score Credit 1 (out of 2 credits)

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

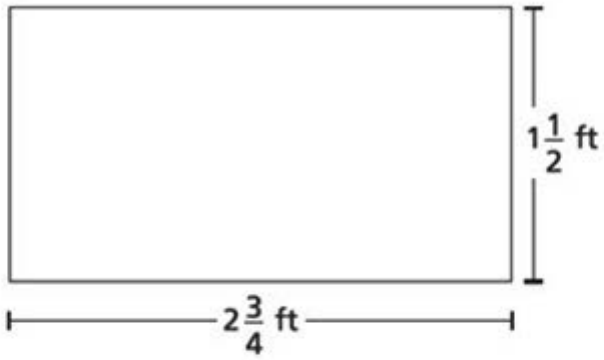
- The two dimensions are correctly written as improper fractions and correctly multiplied; however, errors are made when writing the solution as a mixed number.

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

GUIDE PAPER 6

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

A = L x W
A = 2 3/4 x 1 1/2
A = 2 3/8

Answer 2 3/8 square feet

Score Credit 1 (out of 2 credits)

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

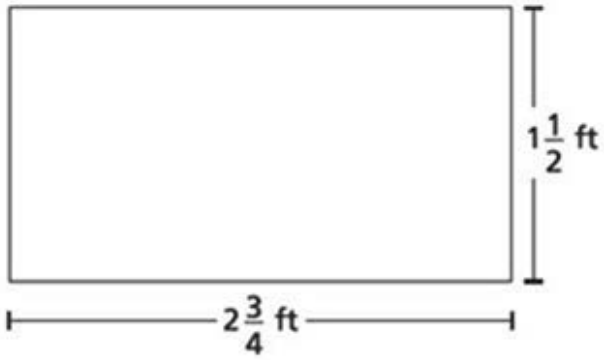
- A correct expression is written to determine the area of the rectangle; however, an incorrect solution is provided, and it is not clear how it is obtained.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$4\frac{1}{8}$

Answer $4\frac{1}{8}$ square feet

Score Credit 0 (out of 2 credits)

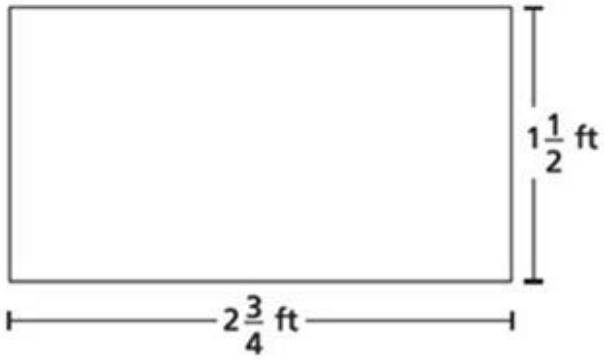
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- A correct solution is provided with no work to support it.

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

39

A diagram of a rectangle with given dimensions is shown below.



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

Show your work.

$2\frac{3}{4} \times 2\frac{3}{4}$

Answer $5\frac{7}{10}$ square feet

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 expression is written, and the numbers are incorrectly multiplied.

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

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

EXEMPLARY RESPONSE

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809

The value of the digit in the hundredths place is larger in 157.890 than in 157.809.

I need to use the hundredths place to compare these numbers because they both have the same whole number and tenths value.

OR Other valid explanation

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809. I know I am correct because the digits in both the numbers are the same, up until the hundredths place. The digit in the hundredths place of 157.890 is nine , but the digit in the hundredths place of 157.809 is zero. 9 > 0, so I know I am correct.

Score Credit 2 (out of 2 credits)

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

- A correct comparison is written, and a correct explanation is provided comparing digits in the same place values in the two numbers.

The explanation is complete and correct.

GUIDE PAPER 2

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809 i know this because going from left to right all of the digits are the same all but the digit 9 the 9 in 157.890 is worth 0.090 and in 157.809 the 9 is worth 0.009 and 0.090 is ten times as much as 0.009

Score Credit 2 (out of 2 credits)

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

- A correct comparison is written, and a correct explanation is provided comparing values of digit 9 in the two numbers.

The explanation is complete and correct.

GUIDE PAPER 3

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809 how i now is because in the hundredths place for the first one it has a nine and in the other hundredths it has a zero so nine is bigger than zero

Score Credit 2 (out of 2 credits)

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

- A correct comparison is written, and a correct explanation is provided comparing digits in the hundredths place in the two numbers.

Although the place values of the first four digits in the two numbers are not addressed, the explanation is sufficient to show a thorough understanding.

GUIDE PAPER 4

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809 because the 9 in 157.809 is in thousandths but the 9 in 157.890 hundredths

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 comparison is written.
- However, the explanation does not sufficiently compare the value of digits in the hundredths place in the two numbers.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

I got my answer by comparing the so I did 157.890 > 157.809 because 9 is greater than 0.

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 comparison is written.
- The digits 9 and 0 are compared; however, the place values of digits used in the comparison is unclear.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809
my answer is correct because the 0 in 157.890 is in the thousanths place where as the 0 in 157.809 is in the hundreths place.

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 comparison is written.
- However, the explanation does not sufficiently compare the value of digits in the hundredths place in the two numbers.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 > 157.809

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 correct comparison is written, no explanation is provided.

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

40

Write a comparison statement using >, <, or = that shows the relationship between the numbers 157.890 and 157.809.

Explain how you know your answer is correct.

157.890 is correct becuase the nines plase is in the tens and in 157.809 the nines plase is in the one. So I know that 157.890 is correct.

Score Credit 0 (out of 2 credits)

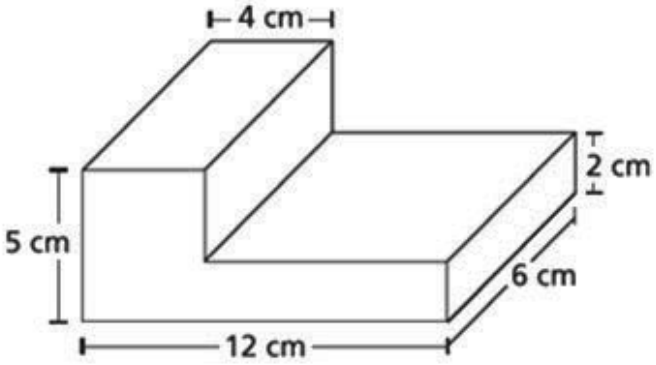
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- A comparison is not written, and an incorrect explanation is provided.

The explanation is insufficient to show any understanding.

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

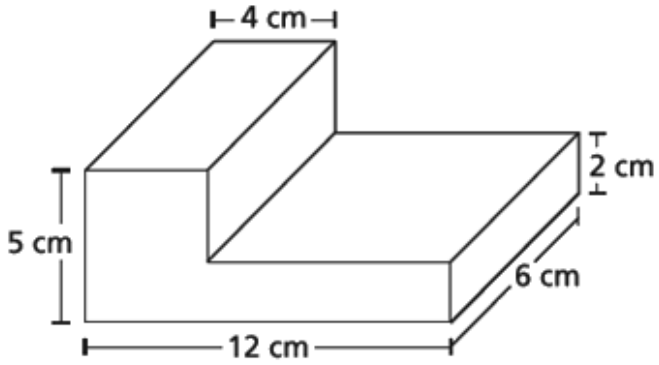
Show your work.

Answer _____ cubic centimeters

EXEMPLARY RESPONSE

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$5 \times 4 \times 6 = 120$
$8 \times 2 \times 6 = 96$
$120 + 96 = 216$

OR

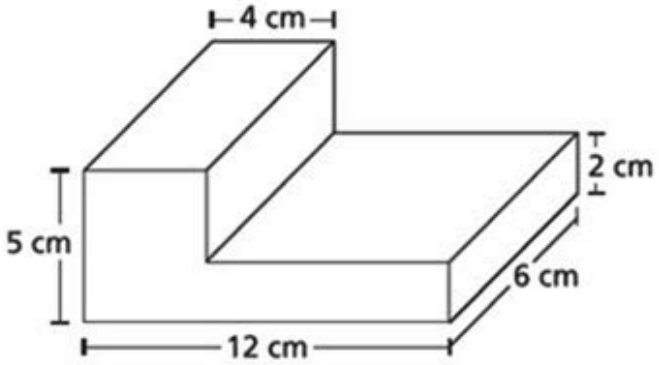
$2 \times 12 \times 6 = 144$
$3 \times 4 \times 6 = 72$
$144 + 72 = 216$

OR Other valid process

Answer 216 cubic centimeters

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$V = l \times w \times h$
$V = 12 \times 6 \times 2$
$V = 144 cm^3$
$V =$
$V = 3 \times 6 \times 4$
$V = 72 cm^3$
$144 + 72 = 216 cm^3$

Answer $216 CM^3$ cubic centimeters

Score Credit 2 (out of 2 credits)

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

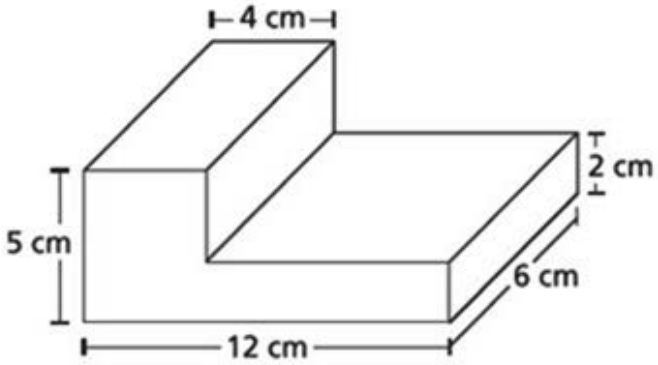
- The volume of each prism and the total volume are correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 2

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$A = 4 \times 5 \times 6 = 120$

$B = 8 \times 2 \times 6 = 96$

$$\begin{array}{r} 120 \\ +\ 96 \\ \hline 216 \end{array}$$

Answer 216 cubic centimeters

Score Credit 2 (out of 2 credits)

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

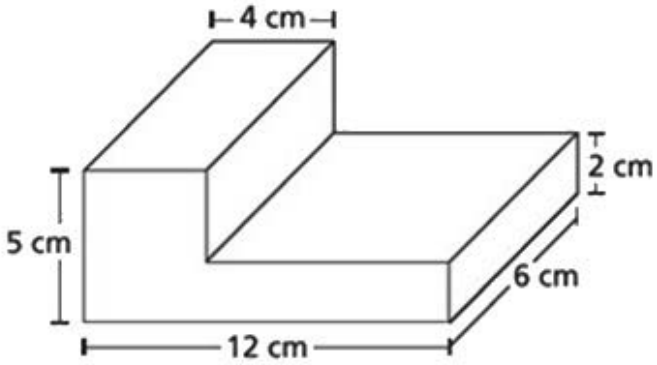
- The volume of each prism and the total volume are correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 3

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

V= L x H x W	V= L x H x W
V= 5 x 4 x 6	V= 2 x 6 x 8
V= 120	V= 96

Answer 216 cubic centimeters

Score Credit 2 (out of 2 credits)

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

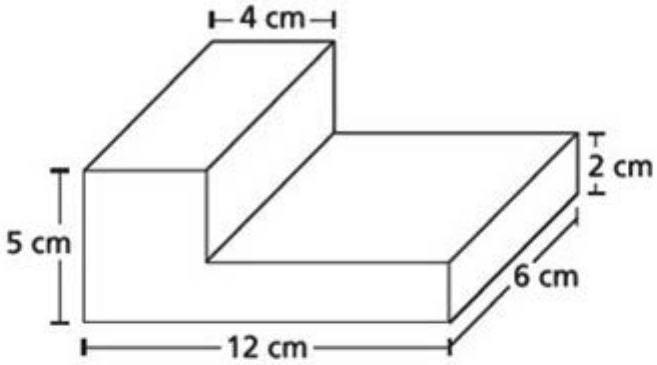
- The volume of each prism and the total volume are correctly determined using sound procedures.
- Although the last step of adding the two volumes is not shown, this does not detract from the demonstration of a thorough understanding.

This response contains sufficient work to show a thorough understanding.

GUIDE PAPER 4

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

A) $4 \times 5 \times 6 = 120$

B) $6 \times 2 \times 6 = 72$

$120 + 72 = 192$

Answer 192 cubic centimeters

Score Credit 1 (out of 2 credits)

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

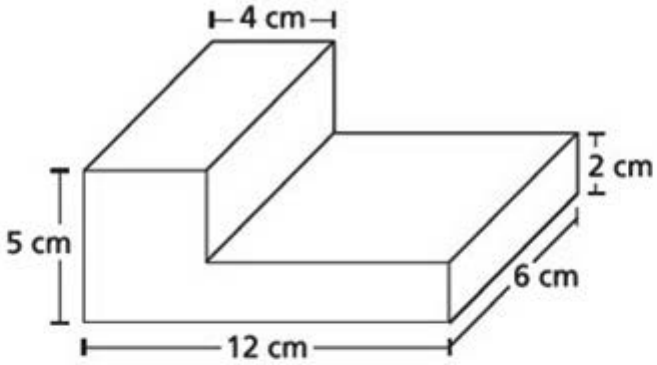
- The volume of the left part of the figure is correctly determined; however, an incorrect dimension of 6 instead of 8 is used when calculating the volume of the right part of the figure.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$(4 \times 6) \times 5 = 120$

$(8 \times 6) \times 2 = 76$

$$\begin{array}{r} 120 \\ +\ 76 \\ \hline 196 \end{array}$$

Answer 196 cubic centimeters

Score Credit 1 (out of 2 credits)

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

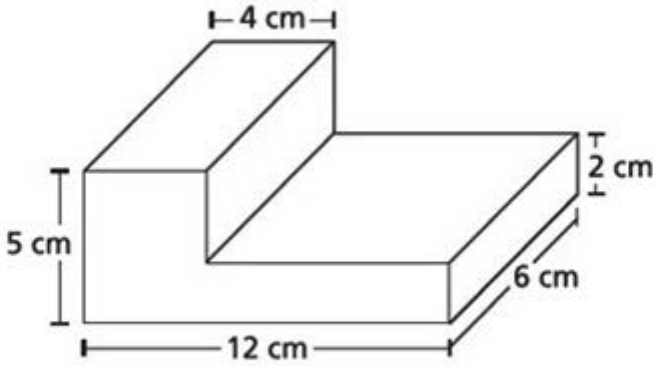
- A multiplication error occurs when calculating the volume of the right part of the figure, resulting in an incorrect solution.

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

GUIDE PAPER 6

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

(I cut the shape into 2 pieces and seperatedthe twelve so they're 4 & 8.)
8 × 6 = 48, 48 × 2 = 96 cm.
4 × 5= 20, 20 × 4 = 80 cm.
96 + 80 = 176 cm.

Answer 176 cubic centimeters

Score Credit 1 (out of 2 credits)

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

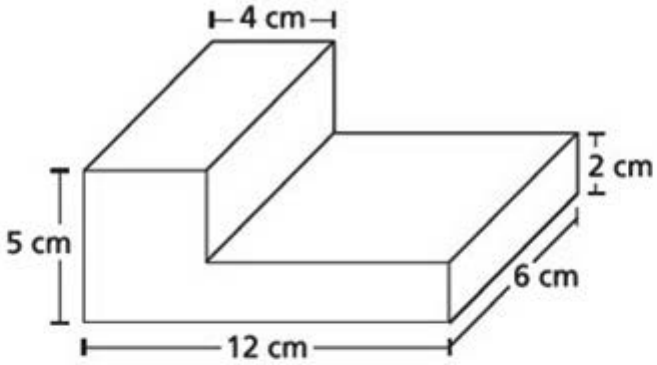
- The volume of the right part of the figure is correctly determined; however, an incorrect dimension of 4 instead of 6 is used when calculating the volume of the left part of the figure, resulting in an incorrect solution.
- The two calculated volumes are correctly added to determine the total volume.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$5 \times 4 \times 12 = 240$ cm $240+24=264$ cubic centimeters
$12 \times 6 \times 2 = 24$ cm

Answer The total volume of the figure is 264 cubic centimeters. cubic centimeters

Score Credit 0 (out of 2 credits)

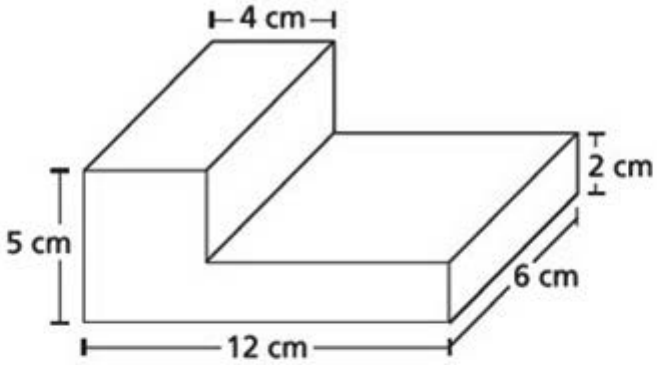
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- Although a correct expression is written to determine the volume of the bottom part of the figure, it is incorrectly calculated.
- An irrelevant volume of 5x4x12 figure is calculated and added to the other volume.

Holistically, this response is insufficient to show any understanding.

41

Two right rectangular prisms were combined to make the figure shown below.



What is the total volume, in cubic centimeters, of the figure?

Show your work.

$12 \times 6 \times 2 = 144$

Answer 144 cubic centimeters

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 volume of the bottom part of the figure is correctly determined, it is inappropriately provided as a solution.
- The volume of the top of the figure and the total volume are not addressed.

Holistically, this response is insufficient to show any understanding.

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

EXEMPLARY RESPONSE

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

The student is incorrect. When you multiply a number by a fraction equivalent to 1 (like $\frac{3}{3}$) the number remains the same. It will not increase or decrease.

OR

No, the student is incorrect. The only time multiplying 6 by a fraction would result in a product less than 6 is when the fraction is less than 1. The fraction $\frac{3}{3}$ is equal to 1, so $6 \times \frac{3}{3}$ will be the same as 6×1 which is 6. The teacher's equation is correct.

OR Other valid explanation

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

The student is incorrect. When multiplying 6 by a fraction less than one, that product will be less than six. When you multiply 6 by a fraction that is equal to one, than the answer will be 6.

Score Credit 2 (out of 2 credits)

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

- The student's claim is correctly identified, and multiplication by a fraction is correctly explained.

The explanation is complete and correct.

GUIDE PAPER 2

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

no the student is incorrect because $\frac{3}{3}$ is equal to one and 1 $\times$ 6 = 6

Score Credit 2 (out of 2 credits)

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

- The student's claim is correctly identified, and multiplication by ⅗ is correctly explained.

The explanation is complete and correct.

GUIDE PAPER 3

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

The Student is not correct because $\frac{18}{3}$ is equal to 6.

Score Credit 2 (out of 2 credits)

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

- The student's claim is correctly identified, and multiplication by ⅗ is correctly explained.

The explanation is sufficient to show a thorough understanding.

GUIDE PAPER 4

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

The student is not correct because $\frac{3}{3} = 1$ so $6 \times \frac{3}{3} = 1$.

Score Credit 1 (out of 2 credits)

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

- The student's claim is correctly identified, and ⅗ is correctly compared with 1; however, an incorrect product is written when explaining the multiplication.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

$\frac{3}{3}$ = 1 1x6=6

Score Credit 1 (out of 2 credits)

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

- The multiplication by ⅗ is correctly explained; however, the student's claim is not identified as incorrect.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

no because $\frac{3}{3}$ is = 1

Score Credit 1 (out of 2 credits)

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

- The student's claim is correctly identified, and ⅗ is correctly compared with 1; however, multiplication by ⅗ is not clearly explained.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

the answer is 7 because you have to multiply $\frac{6}{1} \times \frac{3}{3} =$ so you have to do $3 \times 1 = 3$ so what is 3×6 its 18 and then 3×3 so its 9 and its $\frac{9}{3} + \frac{18}{3} = \frac{27}{3}$ and then you have to $27 \div 3 = 7$ the answer is 7

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 student's claim is not identified as correct or incorrect, and an incorrect explanation is provided.

The explanation is insufficient to show any understanding.

42

A teacher writes the equation $6 \times \frac{3}{3} = 6$ on the board. A student says the equation is wrong because multiplying 6 by a fraction results in a product that is less than 6. Is the student correct?

Explain your answer.

yes i think the student is corrt because mutiplying 6 by a faction results in a product that is less then 6.

Score Credit 0 (out of 2 credits)

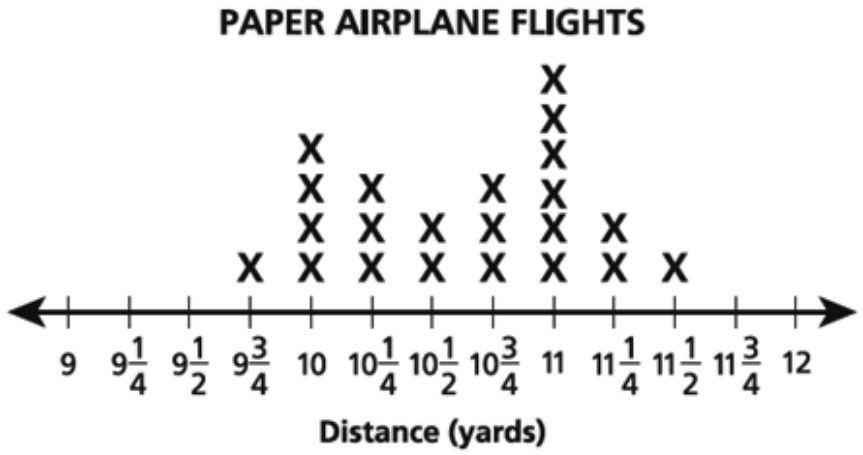
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- The student's claim is incorrectly identified, and multiplication by a fraction is not explained.

The explanation is insufficient to show any understanding.

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

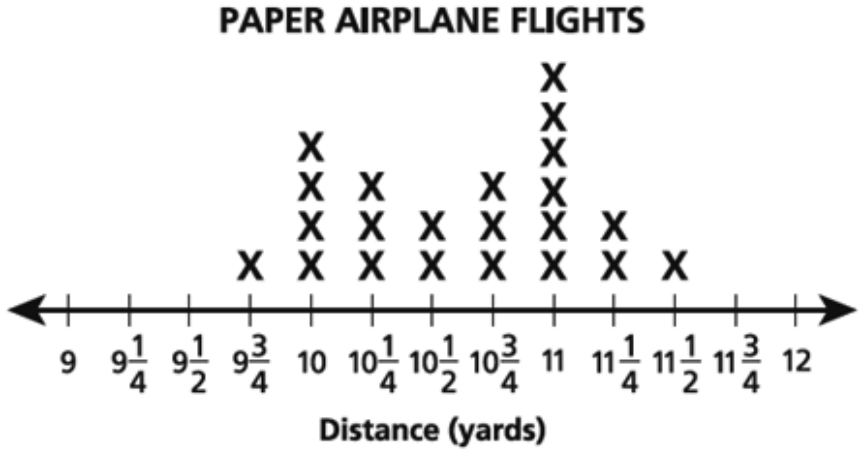
Show your work.

Answer _____ yards

EXEMPLARY RESPONSE

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$$11\frac{1}{2} - 9\frac{3}{4} = 11\frac{2}{4} - 9\frac{3}{4} = 10\frac{6}{4} - 9\frac{3}{4} = 1\frac{3}{4}$$

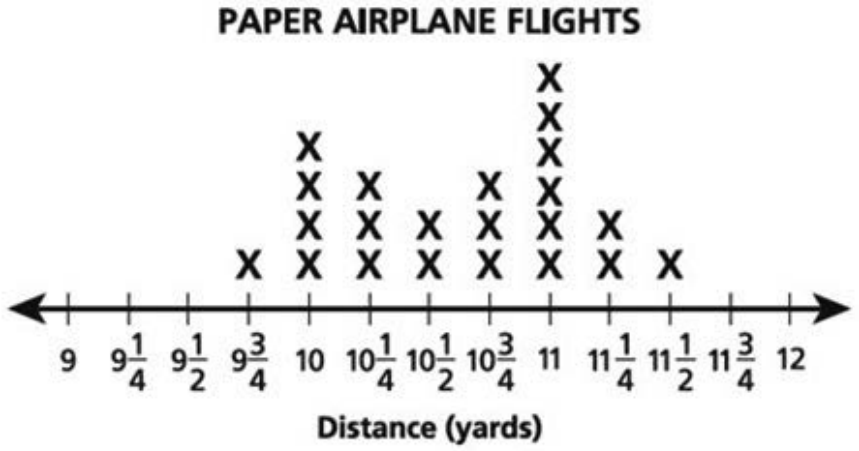
OR Other valid process

Answer $1\frac{3}{4}$ ***OR*** $\frac{7}{4}$ yards

OR Equivalent

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$$\begin{array}{r} 11\frac{2}{4} = 10\frac{6}{4} \\ -\quad 9\frac{3}{4} \\ \hline 1\frac{3}{4} \end{array}$$

Answer $1\frac{3}{4}$ yards

Score Credit 2 (out of 2 credits)

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

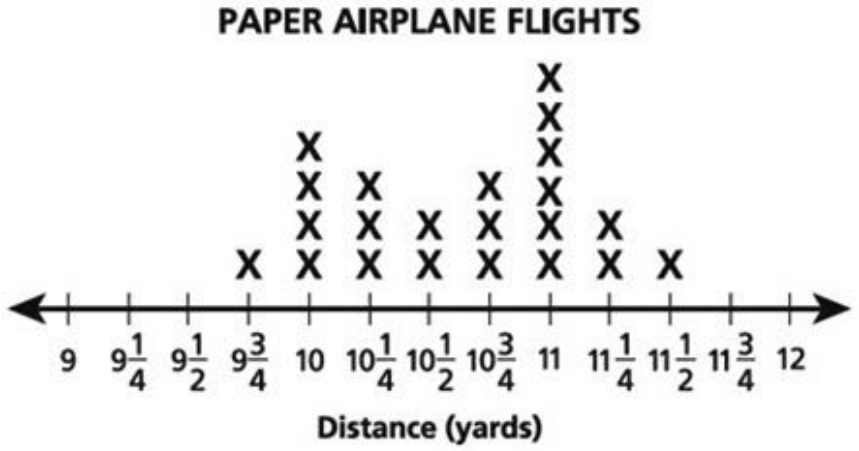
- The longest and shortest flights are correctly identified, and the difference between them is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 2

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$11\frac{1}{2} = \frac{23}{2}$ and $9\frac{3}{4} = \frac{39}{4}$, $\frac{23}{2} = \frac{46}{4}$ $46 - 39 = 7$,

the difference is $\frac{7}{4}$, or $1\frac{3}{4}$.

Answer $1\frac{3}{4}$ yards

Score Credit 2 (out of 2 credits)

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

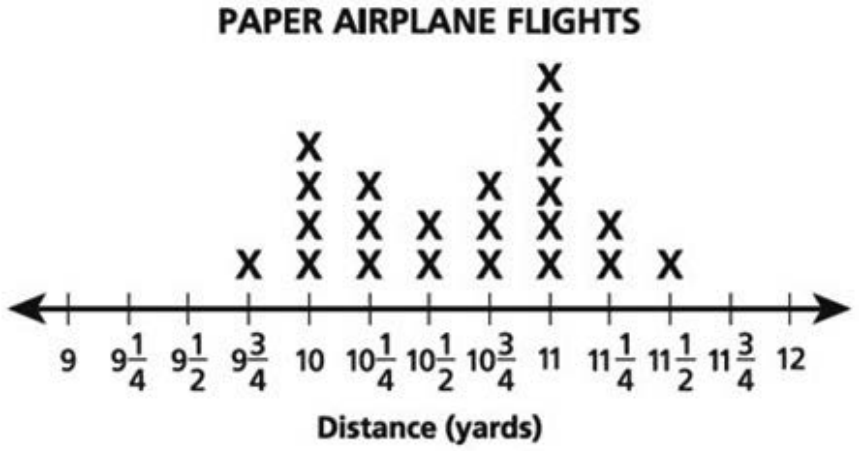
- The longest and shortest flights are correctly identified, and the difference between them is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 3

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

Longest = $11\frac{1}{2} = 11\frac{2}{4}$

Shortest = $9\frac{3}{4} = - 9\frac{3}{4}$

$1\frac{3}{4}$

Answer $1\frac{3}{4}$ yards

Score Credit 2 (out of 2 credits)

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

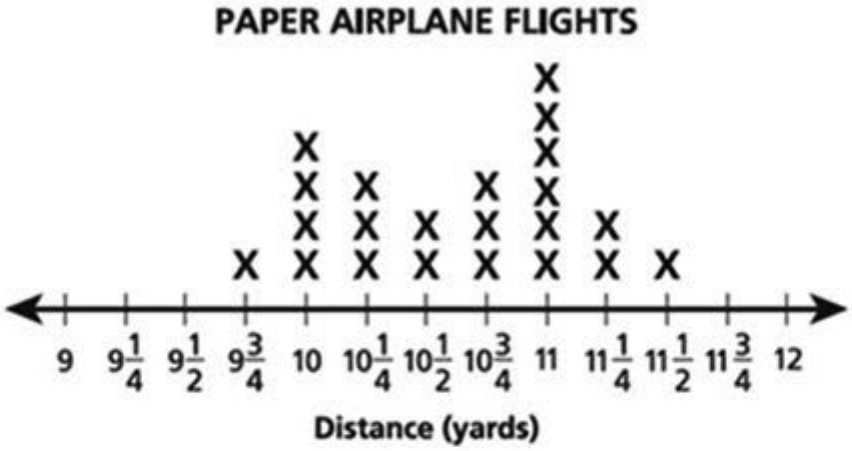
- The longest and shortest flights are correctly identified, and the difference between them is correctly determined using sound procedures.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

11 1/2 - 9 3/4=

Answer _____ yards

Score Credit 1 (out of 2 credits)

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

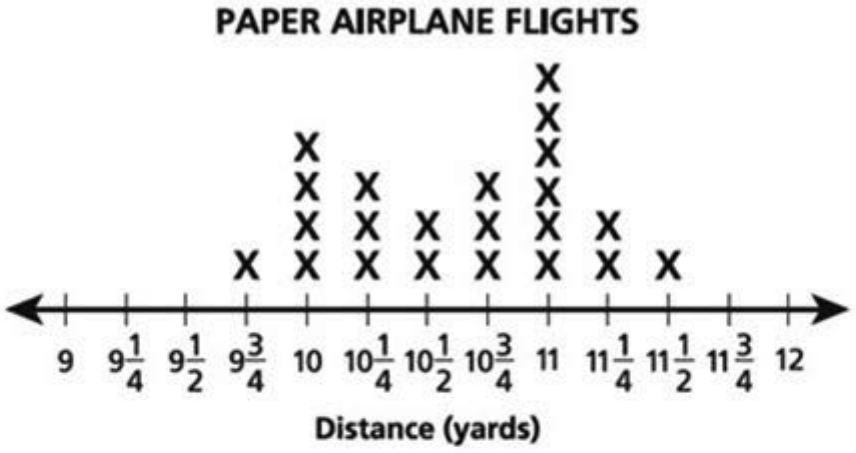
- The longest and shortest flights are correctly identified, and a correct expression is written to determine the difference; however, the difference is not calculated.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$$11 - 9\frac{3}{4} = 1\frac{1}{4}$$

Answer $1\frac{1}{4}$ yards

Score Credit 1 (out of 2 credits)

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

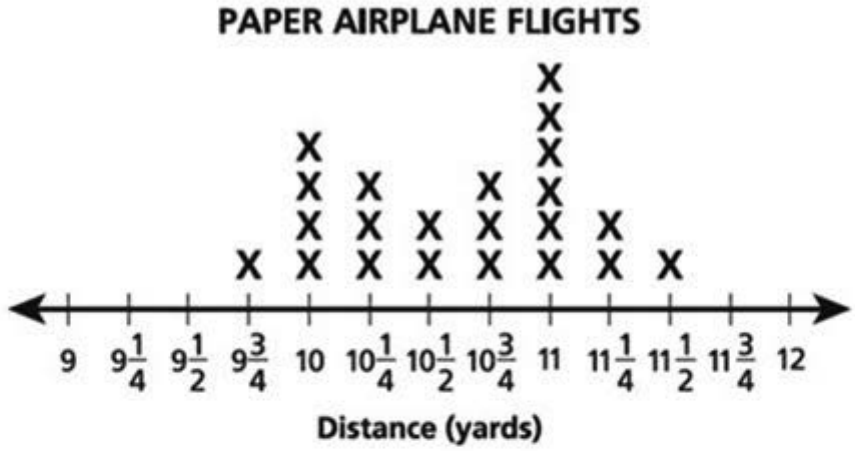
- The shortest flight is correctly identified; however, the longest flight is incorrect.
- The two distances are correctly subtracted to determine the difference.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$9\frac{3}{4} - 11\frac{1}{2}$

Answer $1\frac{3}{4}$ yards

Score Credit 1 (out of 2 credits)

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

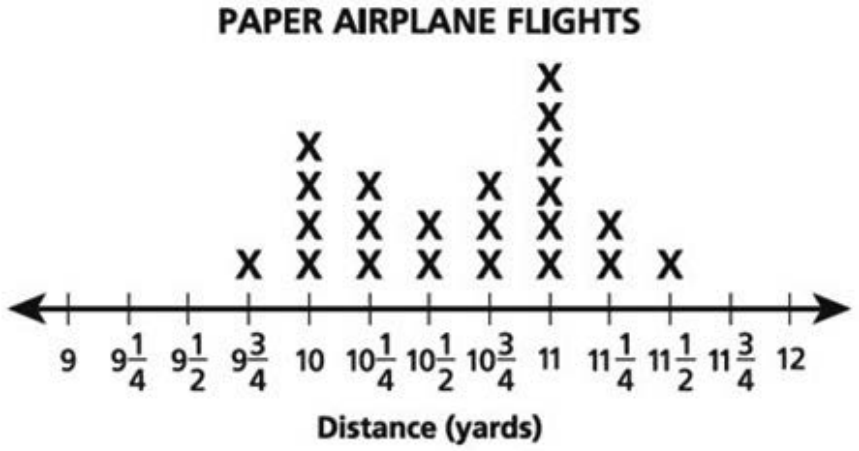
- The longest and shortest flights are correctly identified, and a correct solution is provided; however, the subtraction is written in an incorrect order.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

43

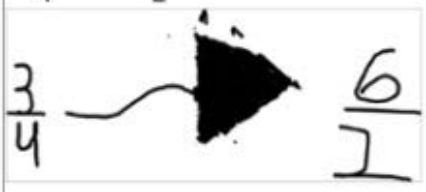
The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$9\frac{3}{4} - 11\frac{1}{2}$



$\frac{6}{2} - \frac{7}{2} = \frac{1}{2}$

$9 - 9 = 0$

Answer $\frac{1}{2}$ yards

Score Credit 0 (out of 2 credits)

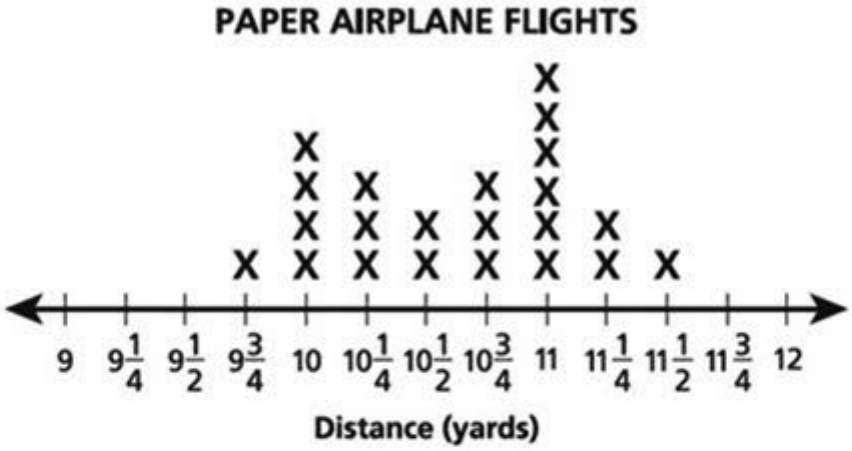
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- Although the longest and shortest flights are correctly identified, the subtraction is written in an incorrect order and is incorrectly carried out.

Holistically, this response is insufficient to show any understanding.

43

The Science Club tests paper airplane designs by measuring how far they fly. The results are recorded in the line plot shown below.



What is the difference, in yards, between the longest and shortest flights?

Show your work.

$$9\frac{3}{4} \div 11 = 1\frac{3}{4}$$

Answer the difference is $1\frac{3}{4}$ 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.

- Although the correct solution is provided, it is obtained using an obviously incorrect procedure.

Holistically, this response is insufficient to show any understanding.

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

Answer _____ miles

EXEMPLARY RESPONSE

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

Josh ran 12.35 miles in March. To find the number of miles he ran in April, multiply the number of miles he ran in March, 12.35 times 3 for a total of 37.05 miles in April. To find the number of miles he ran in May, add 43.1 to the number of miles he ran in March, 12.35, for a total of 55.45 miles. To find the total number of miles, add the distances for these three months together, 12.35 + 37.05 + 55.45, for a total of 104.85 miles.

OR

March: 12.35

April: $12.35 \times 3 = 37.05$

May: $43.1 + 12.35 = 55.45$

Total: $12.35 + 37.05 + 55.45 = 104.85$

OR Other valid process

Answer **104.85** miles

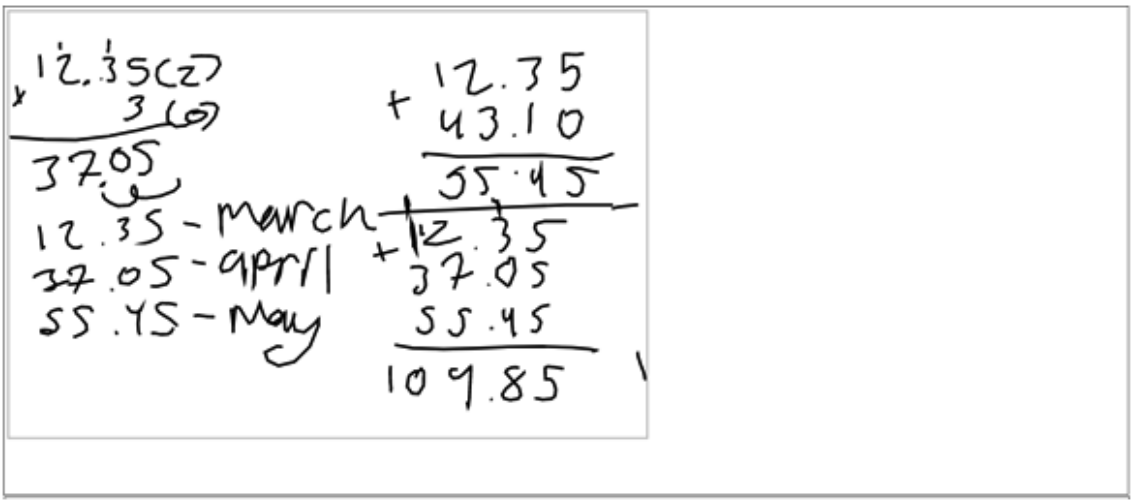
44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.



Answer 104.85 mi/es miles

Score Credit 3 (out of 3 credits)

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

- The number of miles Josh runs in April and May is correctly calculated, and the total number of miles he runs for three months is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 2

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

12.35 × 3	12.35 + 43.10	12.35 + 37.05	55.45 + 49.40
37.05	55.45	49.40	104.85

Answer Josh ran 104.85 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 number of miles Josh runs in April and May is correctly calculated, and the total number of miles he runs for three months is correctly determined using sound procedures.

This response is complete and correct.

GUIDE PAPER 3

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

$(3 \times 12.35) + (43.1 + 12.35) + 12.35 = 104.85$

Answer 104.85 miles

Score Credit 3 (out of 3 credits)

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

- The total number of miles Josh runs for three months is correctly determined using sound procedures.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

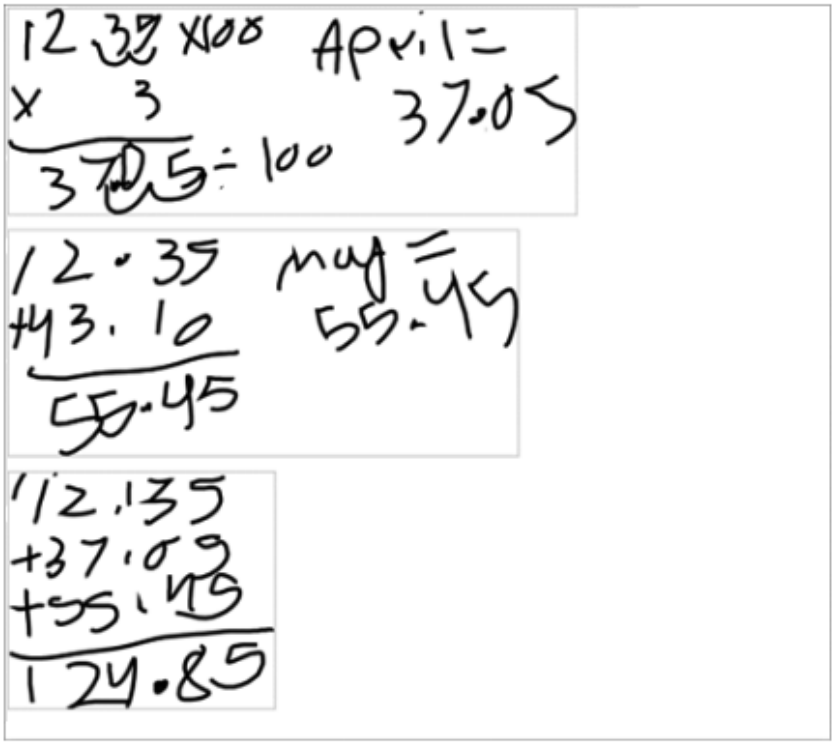
44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.



Answer 124.85 miles

Score Credit 2 (out of 3 credits)

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

- The number of miles Josh runs in April and May is correctly calculated; however, an error when determining the total number of miles results in an incorrect solution.

This response contains an incorrect solution but provides sound procedures.

GUIDE PAPER 5

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

first, 12.35 x 3 = 37.05 then, 43.1 + 12.35 = 55.45

finally, 55.45 + 37.05 = 92.50

Answer 92.50 miles

Score Credit 2 (out of 3 credits)

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

- The number of miles Josh runs in April and May is correctly calculated; however, March miles are ignored when determining the total number of miles.

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

GUIDE PAPER 6

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

12.35 × 3	12.35 × 43.1	12.35 + 37.05	532.285 + 49.400
37.05	532.285	49.40	581.685

Answer 581.685 miles

Score Credit 2 (out of 3 credits)

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

- The number of miles Josh runs in April is correctly calculated; however, multiplication instead of addition is used when determining miles for May.
- The calculated miles for each month are correctly added to determine the total number of miles.

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

GUIDE PAPER 7

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

$12.35 \times 3 = 37.05$
$12.35 + 43.10 = 56.45$
$37.05 + 56.45 = 93.50$

Answer 93.50 miles

Score Credit 1 (out of 3 credits)

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

- The number of miles Josh runs in April is correctly calculated; however, an addition error occurs when calculating miles for May.
- March miles are ignored when determining the total number of miles.

This response addresses some elements of the task correctly but exhibits multiple flaws related to misunderstanding of important aspects of the task.

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

$12.35 \times 3 = 37.05 =$ April
$37.05 + 43.1 = 80.15 =$ May
$12.35 + 37.05 + 80.15 = 139.55 =$ total

Answer 139.55 miles

Score Credit 1 (out of 3 credits)

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

- The number of miles Josh runs in April is correctly calculated; however, April instead of March miles are used to determine miles for May.
- A calculation error is made when determining the total number of miles.

This response addresses some elements of the task correctly but exhibits multiple flaws related to misunderstanding of important aspects of the task.

GUIDE PAPER 9

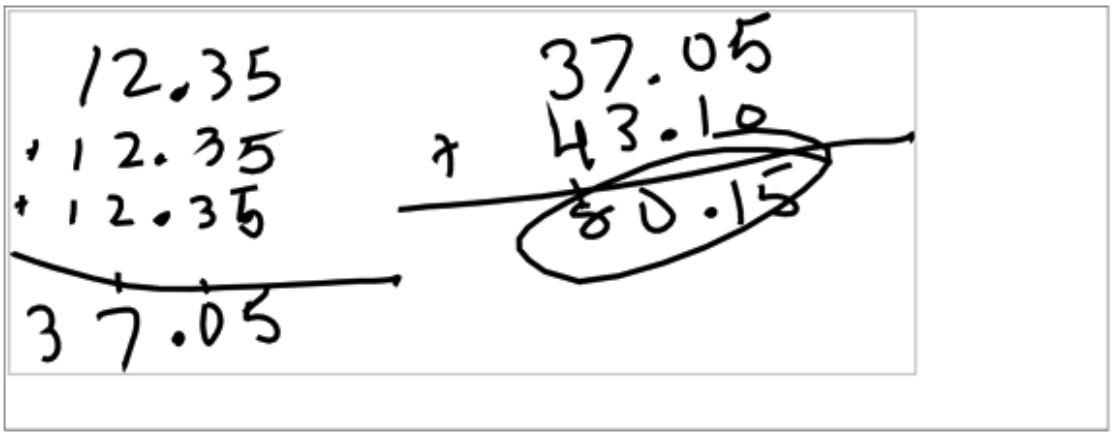
44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.



Answer 80.15 miles in total miles

Score Credit 1 (out of 3 credits)

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

- The number of miles Josh runs in April is correctly calculated.
- March miles are ignored and 43.1 is inappropriately used for May miles when determining the total number of miles.

This response addresses some elements of the task correctly but provides reasoning that is faulty or incomplete.

GUIDE PAPER 10

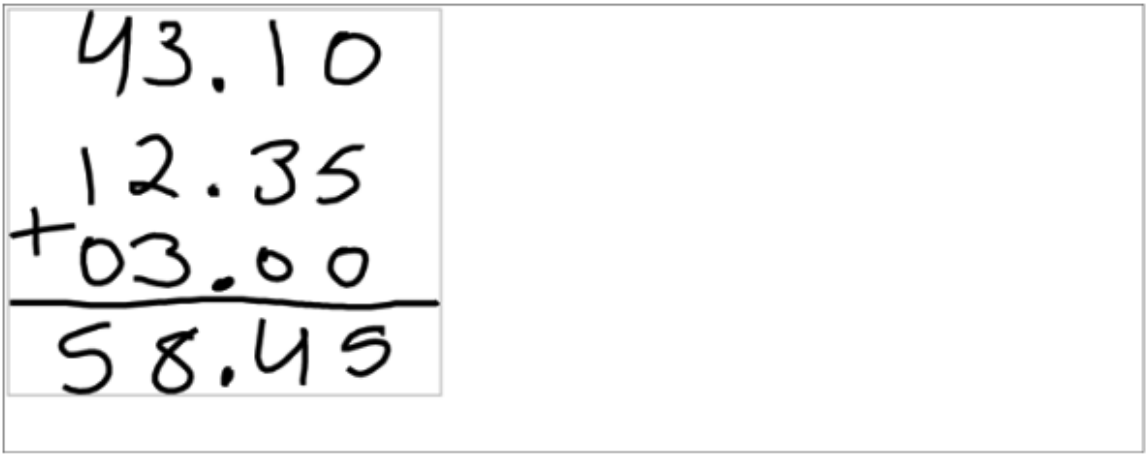
44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.



Answer Josh ran 58.45 miles in total. 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.

- An incorrect procedure is used to obtain an incorrect solution.

This response is insufficient to show any understanding.

44

Josh is training for a race. The number of miles he runs each month for three months is shown below.

- Josh runs 12.35 miles in March.
- Josh runs 3 times as many miles in April as in March.
- Josh runs 43.1 more miles in May than he ran in March.

What is the total number of miles Josh runs for these three months?

Show your work.

Answer 104.85 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 correct solution is provided with no work.

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

Grade 5
Mathematics

Scoring Leader Materials
2025 Training Set