New York State Testing Program

2026

Mathematics Test

Grade 8

Scoring Leader Materials

Training Set

QAI30800

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 8 Mathematics Reference Sheet

CONVERSIONS

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

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

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

CONVERSIONS ACROSS MEASUREMENT SYSTEMS

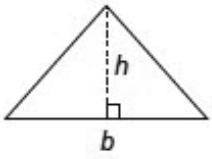
1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 1.609 kilometers
1 kilometer = 0.6214 mile

1 gallon = 3.785 liters
1 liter = 0.2642 gallon

1 pound = 0.454 kilogram
1 kilogram = 2.2 pounds

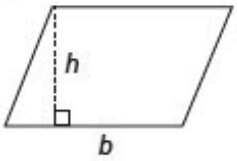
FORMULAS AND FIGURES

Triangle



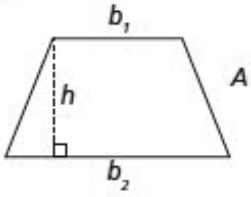
$A = \frac{1}{2}bh$

Parallelogram



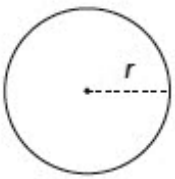
$A = bh$

Trapezoid



$A = \frac{1}{2}h(b_1 + b_2)$

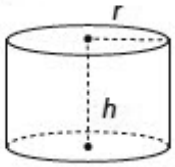
Circle



$C = 2\pi r$
$C = \pi d$
$A = \pi r^2$

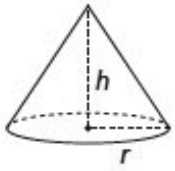
General Prism $V = Bh$

Right Cylinder



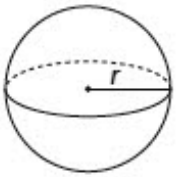
$V = \pi r^2 h$

Right Cone



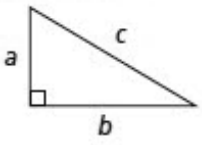
$V = \frac{1}{3}\pi r^2 h$

Sphere



$V = \frac{4}{3}\pi r^3$

Pythagorean Theorem



$c^2 = a^2 + b^2$

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.

40

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

Answer _____ cubic inches

EXEMPLARY RESPONSE

40

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

Answer 128.7 cubic inches

40

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

$V = \frac{1}{3} \pi (3.2^2) \times 12$

$V = 128.679...$

$V = 128.7$

Answer cubic inches

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

40

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

Answer 128.7 cubic inches

Score Credit 1 (out of 1 credit)

A correct answer is provided.

40

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

Answer $\frac{1}{3}\ \pi\ (3.2)^2\ \times\ 12\ =\ 128.68$ cubic inches

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

41

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- A $(6, -4)$
- B $(-3, 8)$
- C $(-9, 3)$

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle A′B′C′. What are the coordinates of C′ after the dilation?

Answer _____

EXEMPLARY RESPONSE

41

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- A (6, −4)
- B (−3, 8)
- C (−9, 3)

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle A′B′C′. What are the coordinates of C′ after the dilation?

Answer (-3, 1)

41

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- A (6, −4)
- B (−3, 8)
- C (−9, 3)

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle A′B′C′. What are the coordinates of C′ after the dilation?

Answer (-3,1)

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

41

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- A (6, −4)
- B (−3, 8)
- C (−9, 3)

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle A′B′C′. What are the coordinates of C′ after the dilation?

Answer

A prime = (2, -1.3)
B Prime = (-1,2.6)
C Prime = (-3,1)

Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 3

41

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- A $(6, -4)$
- B $(-3, 8)$
- C $(-9, 3)$

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle $A'B'C'$. What are the coordinates of C' after the dilation?

Answer -3,1

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

EXEMPLARY RESPONSE

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

The symbol = should be placed in the circle.
When a power is raised to a power,
you multiply the exponents and keep the base the same,
so the expression $(16^5)^4$ is equivalent to 16^{20}.
When two expressions with the same base are multiplied,
you keep the base and add the exponents
so the expression $(16^8)(16^{12})$ is also equivalent to 16^{20}.
Since $(16^5)^4$ and $(16^8)(16^{12})$ are each equivalent to 16^{20},
they are equal to each other.

OR other valid explanation

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

The symbol that should be used is = because using the rule power to the power for (16^5)^4 the exponents hsould be multplied and base stays the same which gets you 16^{20} and using product rule $16^8 \times 16^{12}$ the base stays the same but you add the exponents and get 16^{20} and you get the same 16^{20} on both sides so they are equal so the equal sign.

Score Credit 2 (out of 2 credits)

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

- The correct symbol is chosen and a valid explanation is provided.

This response is complete and correct.

GUIDE PAPER 2

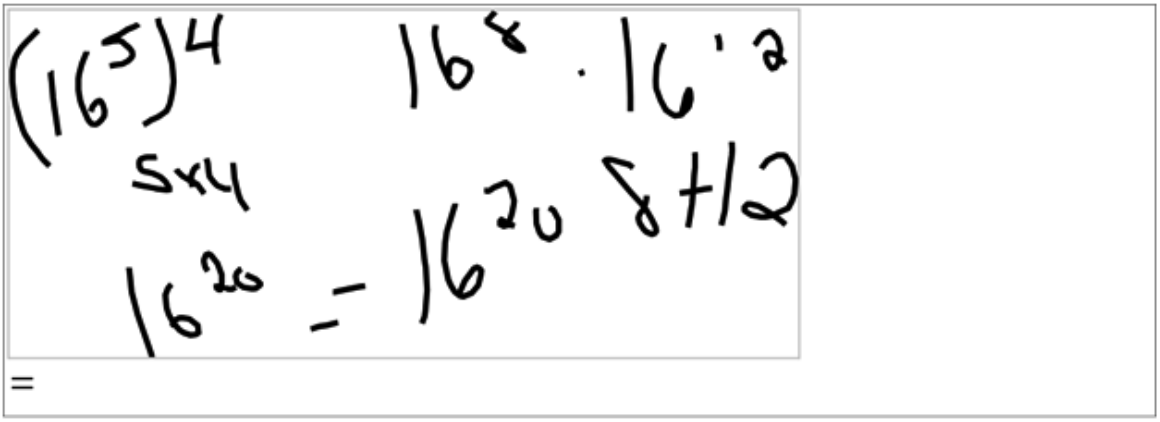
43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.



Score Credit 2 (out of 2 credits)

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

- The correct symbol is chosen, and properties of exponents are correctly used to explain the choice.

This response is complete and correct.

GUIDE PAPER 3

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

= this sybole would be right because 16^8 x 16^{12} = 16^{20}

and (16^5) ^4 would also become 16^ 20

Score Credit 2 (out of 2 credits)

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

- The correct symbol is chosen and a valid explanation is provided.

This response is sufficient to demonstrate a thorough understanding.

GUIDE PAPER 4

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

The equal symbol would make the comparision statement true because 8 + 12 = 20 and
5 X 4 = 20.

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 symbol is chosen.
- However, the explanation is incomplete.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

= Because 16 to the 20th power is equal to 16 to the 20th power

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 symbol is chosen.
- However, the explanation is incomplete.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

i say they are = to because when you multiply exponents with the same base they are added and that would equal 20 and the other one is multipleid by the exponets also =ing to 20

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 symbol is chosen.
- However, the explanation is incomplete.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

The answer should be = since each side is equal to 1.21

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 symbol is chosen, an incorrect explanation is provided.

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

43

A student wrote an incomplete comparison statement for two expressions as shown below.

$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$

Use the properties of exponents to explain which symbol, >, <, or =, should be placed in the circle to make the comparison statement true.

Explain your answer.

the symbol < should be used for this answer becuase if you add 8 + 12 = 20 then. 16 × 16= 256. but if you add 5 + 4 = 9 so you will get $16^9 < 256^{20}$

Score Credit 0 (out of 2 credits)

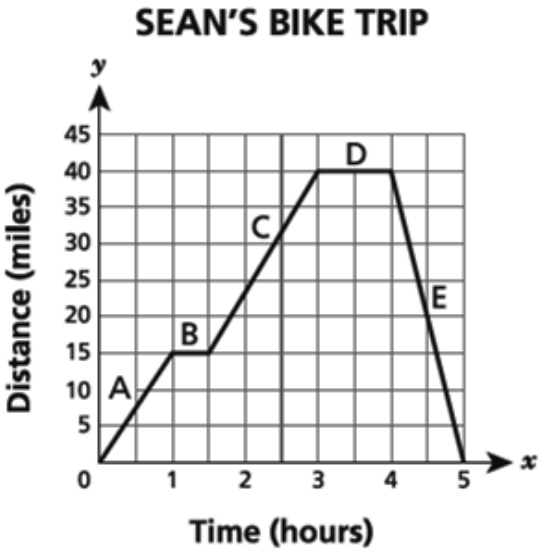
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- The properties of exponents are applied incorrectly, resulting in an incorrect symbol chosen.

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

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.



Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

EXEMPLARY RESPONSE

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

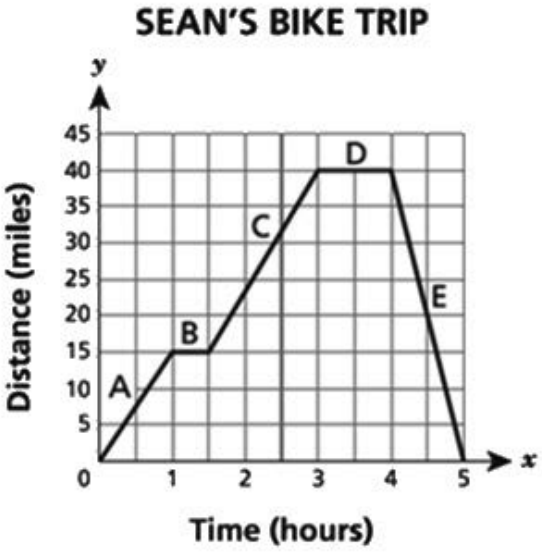
Explain your answer.

Sean is not bike riding during segments B and D because during those segments the line is horizontal meaning the distance in miles is not changing but time is.

OR other valid explanation

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.



Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

Segment B and D because the distance is the same for a period of time, and the line is horizontal, meaning that Sean is not moving, but staying in place. For segment b his distance stays at 15 miles for 30 mintues. Also for segment D his distance stays at 40 miles for 1 hour.

Score Credit 2 (out of 2 credits)

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

- The correct segments are identified, and a valid explanation is provided.

This response is complete and correct.

GUIDE PAPER 2

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

During segments B and D, Sean wan't riding his bike. I can tell because even though the x variable, time, increases, the y variable, distance stays the same. Therefore, Sean wasn't riding his bike during those time segments.

Score Credit 2 (out of 2 credits)

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

- The correct segments are identified, and a valid explanation is provided.

This response is complete and correct.

GUIDE PAPER 3

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

B and D because the distance didnt change just the time.

Score Credit 2 (out of 2 credits)

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

- The correct segments are identified, and a valid explanation is provided.

This response is sufficient to demonstrate a thorough understanding.

GUIDE PAPER 4

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

B and D because they are the flat points which shows hes not moving.

Score Credit 1 (out of 2 credits)

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

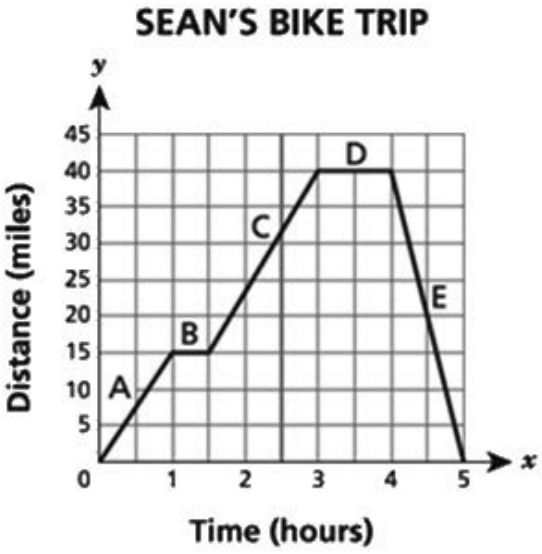
- The correct segments are identified.
- However, the explanation is incomplete.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.



Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

B and D because it's a horizantal line

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 segments are identified.
- However, the explanation is incomplete.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

segment D of the graph shows a period of time where sean was resting because the distance stayed the same

Score Credit 1 (out of 2 credits)

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

- Segment D is correctly identified, and a valid explanation is provided.
- However, segment B is not identified.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.

Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

Sean was resting in B and D becuase you can see where he made the stops.

Score Credit 0 (out of 2 credits)

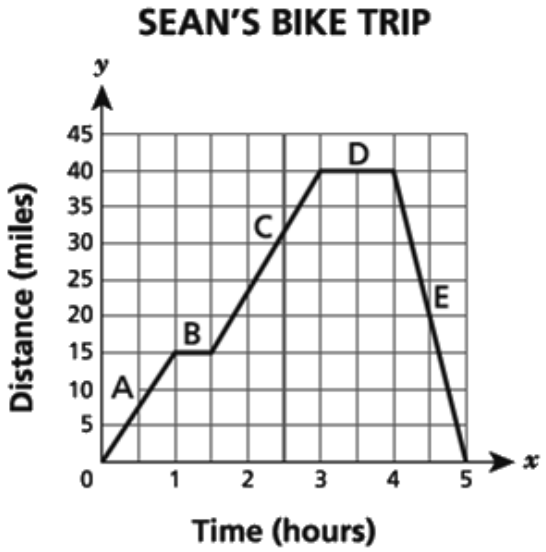
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- Although the correct segments are identified, the explanation is insufficient.

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

44

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.



Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

from hour 1, to 1 1/2. Another is from hour 3 to hour 4.

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 correct intervals of time are stated for the segments, no explanation is provided.

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

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

Answer _____ cubic inches

EXEMPLARY RESPONSE

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

$V = Bh$

$V = (l \times w) \times h$

$V = (20.5 \times 13.5) \times 10$

$V = 2{,}767.5$ cubic inches

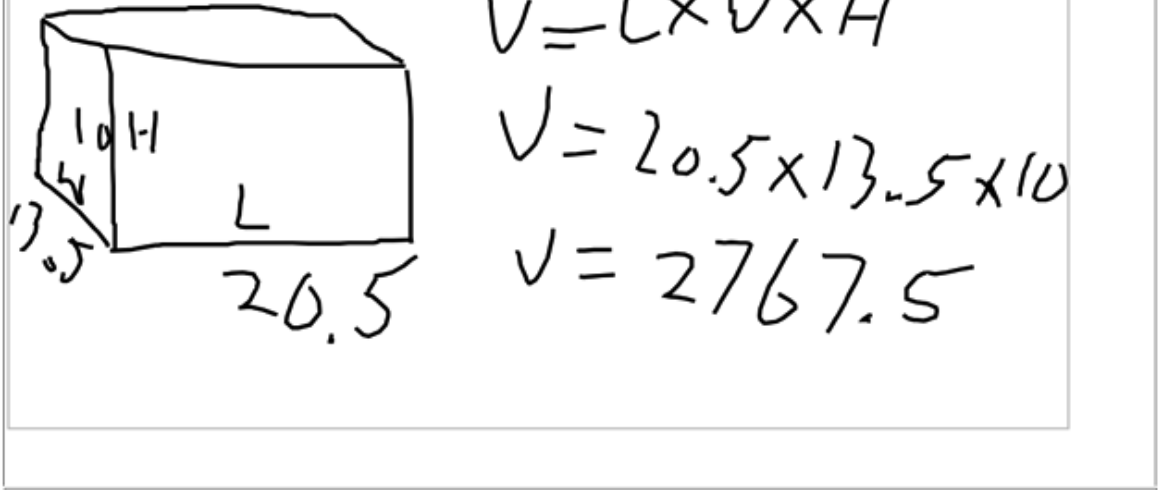
Or other valid process

Answer 2,767.5 cubic inches

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.



Answer 2767.5 cubic inches

Score Credit 2 (out of 2 credits)

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

- The correct volume is determined using a mathematically sound procedure.

This response is complete and correct.

GUIDE PAPER 2

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

20.5x13.5x10
13.5 x 10 = 135
135 x 20.5 = 2767.5

Answer 2767.5 cubic inches

Score Credit 2 (out of 2 credits)

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

- The correct volume is determined using a mathematically sound procedure.

This response is complete and correct.

GUIDE PAPER 3

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

$20.5 \times 13.5 \times 10$

Answer 2767.5 cubic inches

Score Credit 2 (out of 2 credits)

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

- The correct volume is determined using a mathematically sound procedure.

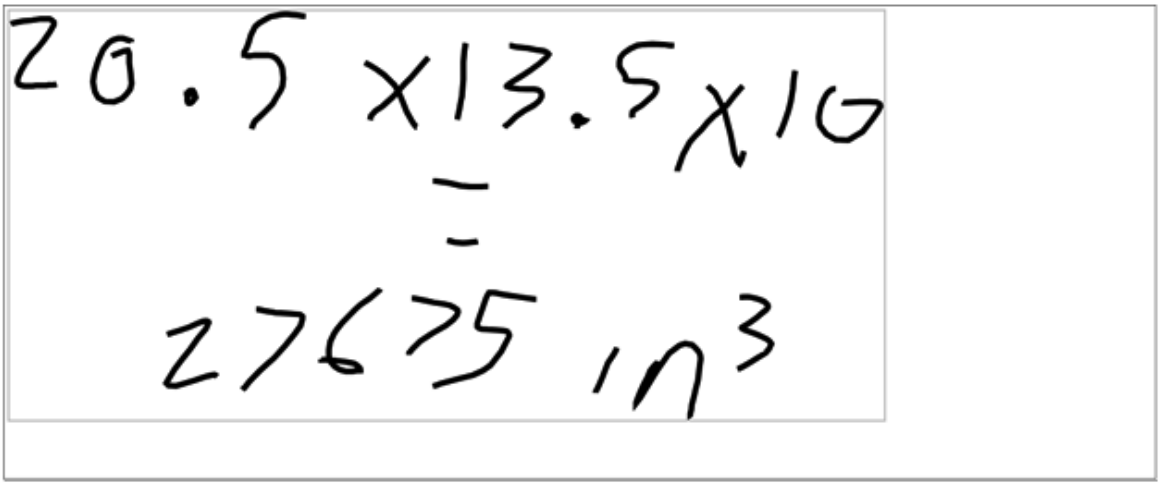
This response is complete and correct.

GUIDE PAPER 4

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.



Answer 27675 cubic inches

Score Credit 1 (out of 2 credits)

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

- A mathematically sound procedure is used to determine the volume.
- However, a calculation error results in an incorrect solution.

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

GUIDE PAPER 5

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

l x w x h

2767.5

Answer 2767.5 cubic inches

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 formula for volume is displayed, with the correct volume shown.
- However, it is unclear how this solution was determined.

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

GUIDE PAPER 6

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

20.5x13.5=276.75

Answer 276.75 cubic inches

Score Credit 1 (out of 2 credits)

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

- The base area of the box is correctly determined.
- However, no further work is shown to find the volume, and the base area of the box is inappropriately provided as the solution.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

20.5+13.5+10=44

Answer 44 cubic inches cubic inches

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 procedure is used to determine an incorrect solution.

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

45

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

we basically just have to multiply all the numbers together

Answer 27675 cubic inches

Score Credit 0 (out of 2 credits)

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

- An incorrect solution is provided, and the description of the procedure is insufficient.

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

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

Answer _____ cups

EXEMPLARY RESPONSE

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

$y = -2.3(60) + 187$
$= -138 + 187$
$= 49$

OR other valid process

Answer 49 cups

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

Y= Cups of coffee sold daily
X=Temperature
-2.3(60)= -138
-138 +187= 49
The manager can predict to sell 49 cups of coffee.

Answer 49 cups cups

Score Credit 2 (out of 2 credits)

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

- The predicted number of cups of coffee sold on a 60-degree day is correctly determined using mathematically sound procedures.

The response is complete and correct.

GUIDE PAPER 2

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

49 cups of coffee can be sold on a day that is 60 degrees because -2.3 × 60 + 187=49

Answer 49 cups

Score Credit 2 (out of 2 credits)

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

- The predicted number of cups of coffee sold on a 60-degree day is correctly determined using mathematically sound procedures.

The response is complete and correct.

GUIDE PAPER 3

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

-2.3(60)+187=49

Answer 49 cups

Score Credit 2 (out of 2 credits)

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

- The predicted number of cups of coffee sold on a 60-degree day is correctly determined using mathematically sound procedures.

The response is complete and correct.

GUIDE PAPER 4

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

-2.3(60)+187
-2.3x60=138
138+187=325 which is the cups sold

Answer 325 cups

Score Credit 1 (out of 2 credits)

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

- A mathematically sound procedure is used to determine the predicted number of cups of coffee to be sold.
- However, a calculation error (–2.3 × 60 = 138) occurs, resulting in an incorrect solution.

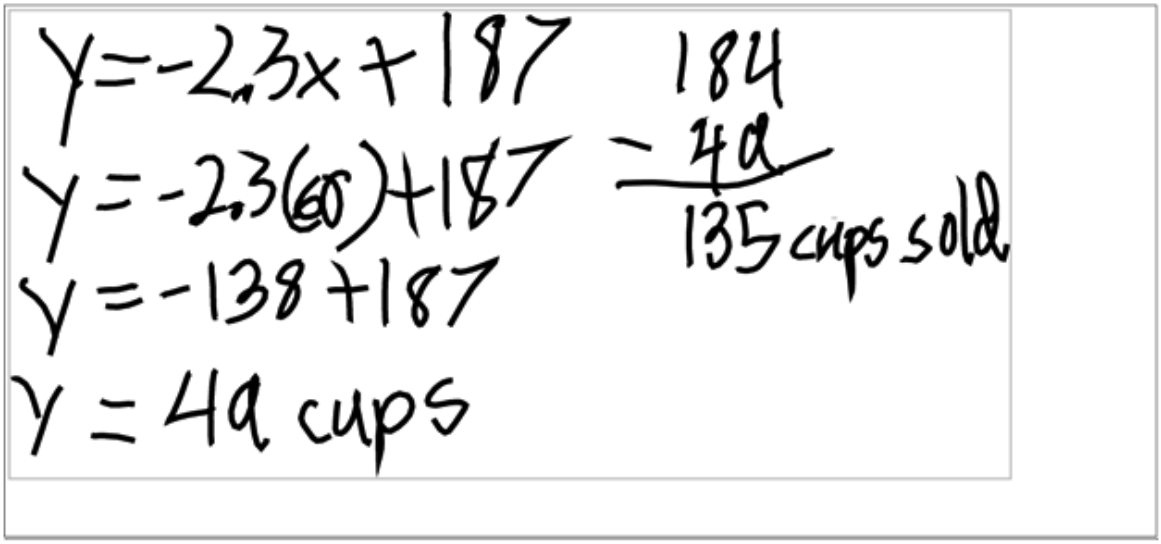
This response contains an incorrect solution but applies a mathematically appropriate process.

GUIDE PAPER 5

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.



Answer 135 cups

Score Credit 1 (out of 2 credits)

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

- A mathematically sound procedure is used to determine the predicted number of cups of coffee to be sold.
- However, the correct predicted number of cups is inappropriately subtracted from 184, resulting in an incorrect solution.

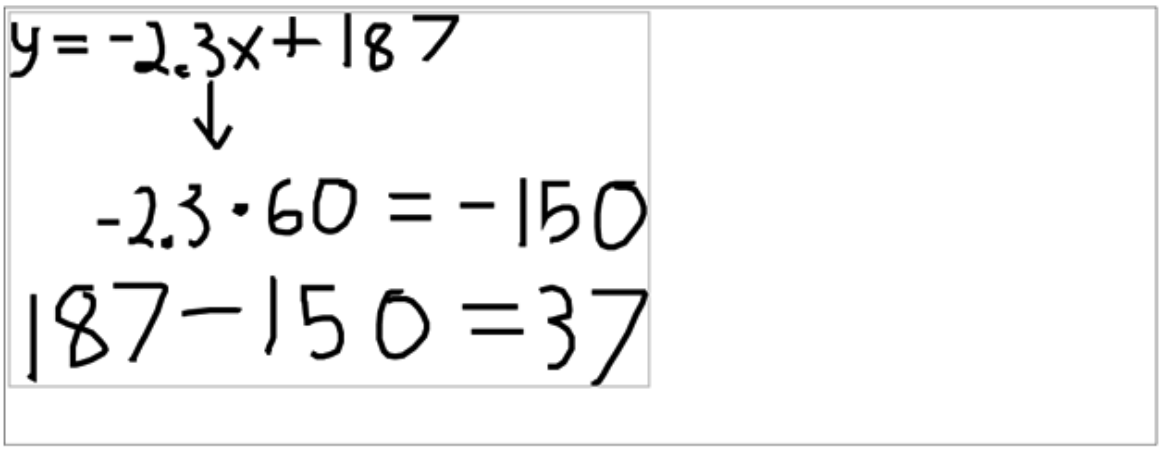
This response contains an incorrect solution but applies a mathematically appropriate process.

GUIDE PAPER 6

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.



Answer 37 cups

Score Credit 1 (out of 2 credits)

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

- A mathematically sound procedure is used to determine the predicted number of cups of coffee to be sold.
- However, a calculation error ($-2.3 \times 60 = -150$) occurs, resulting in an incorrect solution.

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

GUIDE PAPER 7

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

2.3x+187+60=249.3

Answer 249.3 cups

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 procedure is used to find an incorrect solution.

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

46

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is 60°F ?

Show your work.

$187 \times 0.23x=43.01$

Answer 43 cups

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 procedure is used, and an incorrect solution is provided.

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

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

Answer _____ square feet

EXEMPLARY RESPONSE

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

$C = \pi d$
$5.5\pi = \pi d$
$5.5 = d$
$r = {}^{5.5}/_{2} = 2.75$
$A = \pi r^2$
$A = \pi(2.75)^2$
$A = \pi(7.5625)$
$A = 23.75829\ldots \approx 24$

OR other valid process

Answer 24 square feet

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

$5.5\pi \div \pi = 5.5$
5.5=diameter
$5.5 \div 2 = 2.75$(radius)
$A=\pi \times r^2$
$A= \pi \times 2.75^2 = 23.758....$ rounds to = 24 square feet

Answer about 24 square feet 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 rug, to the nearest square foot, is correctly determined using a mathematically sound procedure.

This response is complete and correct.

GUIDE PAPER 2

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

$C=2\pi r$

$5.5\pi = 2\pi r$

$/2 \qquad /2$

$2.75\pi = \pi r$

$/\pi \qquad /\pi$

$2.75=r$

$A=\pi r^2$

$A=\pi\ 2.75^2$

$a=23.76$

Answer 24 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 rug, to the nearest square foot, is correctly determined using a mathematically sound procedure.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 3

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

$c=d \times \pi \qquad A=\pi \times r^2$

$d=5.5$

$r=2.75$

$A=2.75^2 \pi \qquad A=7.5625 \times \pi = 23.75829444$

Answer 24 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 rug, to the nearest square foot, is correctly determined using a mathematically sound procedure.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

area of a circle = πr^2

circumference = π d

radius= 1/2 of diameter

$5.5\pi \div \pi = 5.5$

5.5 = diameter

1/2 of 5.5= 2.75 = radius

π x2.75x2.75= 7.5625... π

$= 8\pi$

Answer 8π 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 mathematically correct procedure is used to determine the area of the rug.
- However, inappropriate rounding occurs, and the answer is left in terms of π, resulting in an incorrect solution.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

$A = \pi r2$

$5.5 \div 2 = 2.75$

$A = \pi\ 2.75^2$

$A = 23.75829444$

$A = 23.8$

Answer 23.8 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 mathematically correct procedure is used to determine the area of the rug.
- However, the answer is not rounded to the nearest square foot, resulting in an incorrect solution.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

5.5/2=2.25
2.25 squared=5.0625
5.0625 × π =15.90431...

Answer 16 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 mathematically correct procedure is used to determine the area of the rug.
- However, a calculation error in determining the radius occurs, resulting in an incorrect solution.

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

GUIDE PAPER 7

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

5.5 x 3.14 = 17.27
17 sqaure foot

Answer 17 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 procedure is used to determine an incorrect solution.

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

47

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

5.5 divided by 2 is 2.75

Answer 6.4 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.

- Although the radius is correctly determined, no further calculations are performed, and an incorrect solution is provided.

Holistically, this response is insufficient to show any understanding.

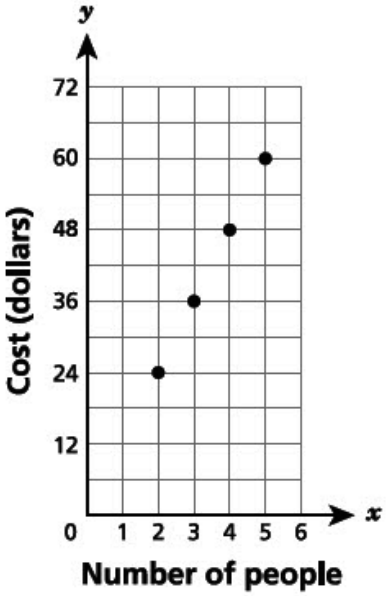
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

EXEMPLARY RESPONSE

48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
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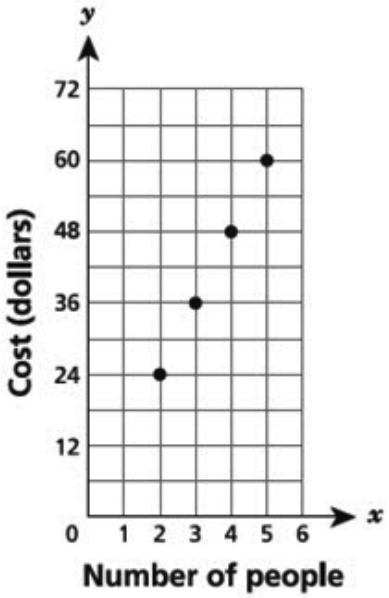
TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

For Splash Zone, the unit rate is the constant of proportionality (cost per person), so 33.75 ÷ 3 is $11.25 per person.
For Tube Time, the slope of the graph is $^{12}/_{1}$ which means that for every 1 person, the price increases by 12.
So the unit rate is $12.00.
For 8 friends at Splash Zone, the cost would be 8 × 11.25 = $90.00.
And for 8 friends at Tube Time the cost would be 8 × 12.00 = $96.00.
So the difference in the cost between the 2 companies for 8 friends is 96 – 90 which is equal to $6.00.

OR other valid explanation

48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
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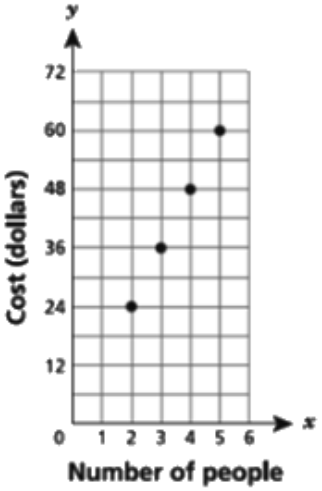
TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

The difference, in the cost, between the two companies, for 8 friends to go tubing is $6. To find the RoC of Splash Zone, you can use the points (3, 33.75) and (4,45) and then use $\frac{Y2-Y1}{X2-X1}$, which would get you $\frac{45-33.75}{4-3}$, which is equal to 11.25, so when you plug it into the equation Y=Mx+B, you would get Y=11.25x. For Tube Time, you can use the points (2,24) and (3,36), and then use $\frac{Y2-Y1}{X2-X1}$, which would get you $\frac{36-24}{3-2}$, which is equal to 12, so when you plug it into the equation, you would Y=12x. Now you can plug 8 for X in both equations to Y=90 for Splash Zone, and Y=96 for Tube Time and when you subtract 90 from 96, you would get 6.

Score Credit 3 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined, and a valid explanation is provided.

This response is complete and correct.

GUIDE PAPER 2

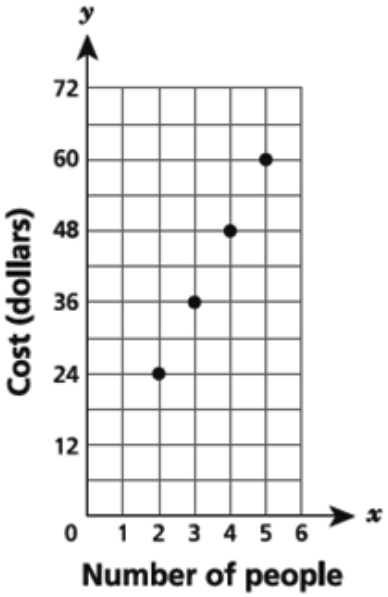
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

splash zone 33.75 ÷ 3 = 11.25 tube time 24 ÷ 2 = 12
11.25 × 8 = 90 12 × 8 = 96
theres a 6 dollar difference

Score Credit 3 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined, and a valid explanation is provided.

This response is complete and correct.

GUIDE PAPER 3

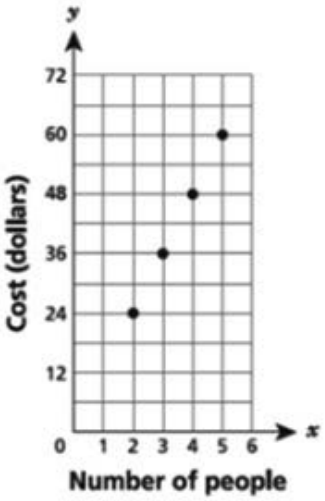
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

67.5-11.25=56.25-11.25=45-11.25=33.75
24 ÷ 2=12 36 ÷ 3=12 48 ÷ 4=12 60 ÷ 5=12

11.25 × 8=90
12 × 8=96
96-90=6

Score Credit 3 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined, and a valid explanation is provided.
- The run-on equation does not detract from the demonstration of a thorough understanding.

This response is sufficient to demonstrate a thorough understanding.

GUIDE PAPER 4

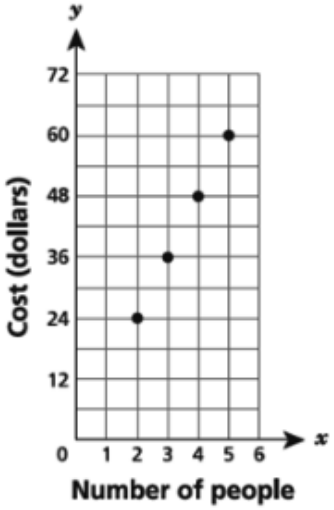
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

Splash Zone
y=11.25x
y=11.25(8)
y=90

Tube Time
y=12x
y=12(8)
y=96

The difference
96-90=6

The difference is by 6 dollars and Splash Zone is cheaper than Tube Time.

Score Credit 2 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined.
- However, it is unclear how the unit rates were determined.

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

GUIDE PAPER 5

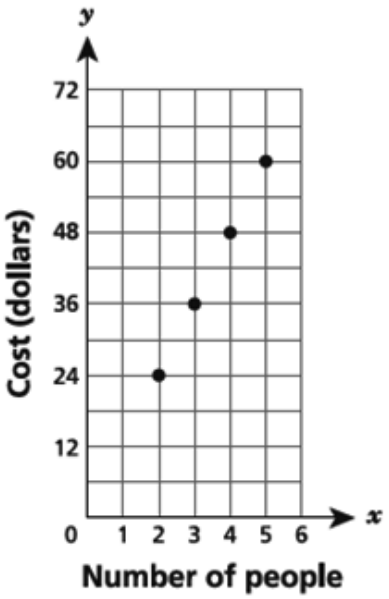
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

Tube time = 12dollars per person
Splash zone= 11.25 dollars per person
(12 × 8) – (11.25 × 8)= 6 dollar difference.

Score Credit 2 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined.
- However, it is unclear how the unit rates were determined.

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

GUIDE PAPER 6

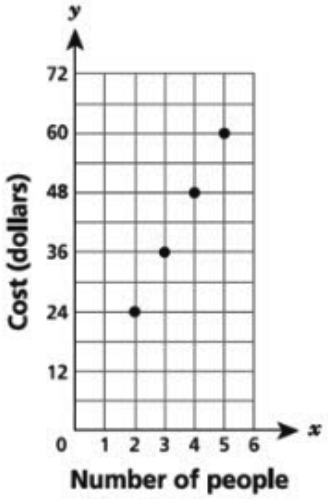
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

-At Splash Zone the cost per person is $11.25, which means for 8 people the total cost would be $90.00
-At Tube Time the cost per person is $12.00, which means for 8 people the total cost would be $96.00
-So for 8 people Spalsh Zone costs $6.00 less than Tube Time

Score Credit 2 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined.
- However, it is unclear how the unit rates were determined.

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

GUIDE PAPER 7

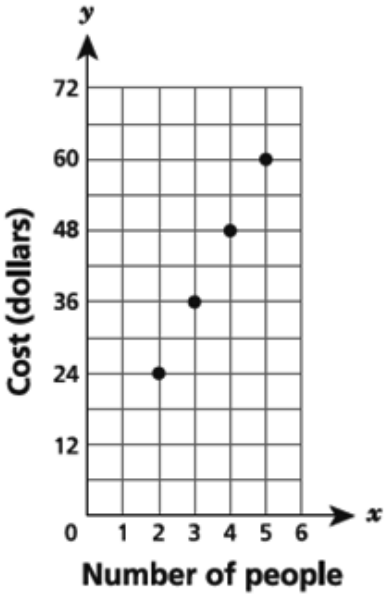
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

Splash zone is $90 for 8 people and Tube time is $96 for 8 people wich means that there is a $6 difference between the both.

Score Credit 1 (out of 3 credits)

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

- The correct difference in cost for 8 people to go tubing is determined.
- However, the explanation is incomplete; it is unclear how the total costs were determined.

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

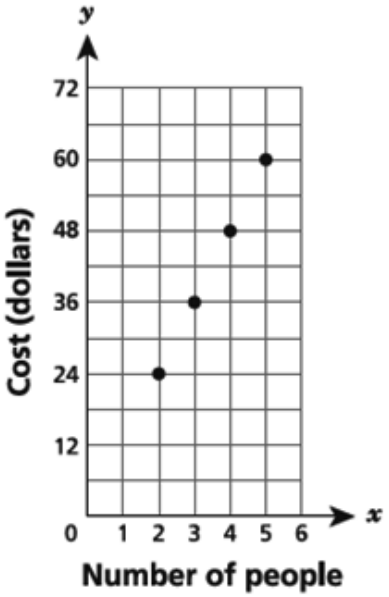
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

The difference in coast is $6 for 8 people to go. For tube time its $12 a person and splash zone is $11.25 a person.

Score Credit 1 (out of 3 credits)

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

- The difference in cost for 8 people to go tubing is correctly provided; however, it is unclear how this was determined.
- The total costs were not addressed, and it is unclear how the unit rates were determined.

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

GUIDE PAPER 9

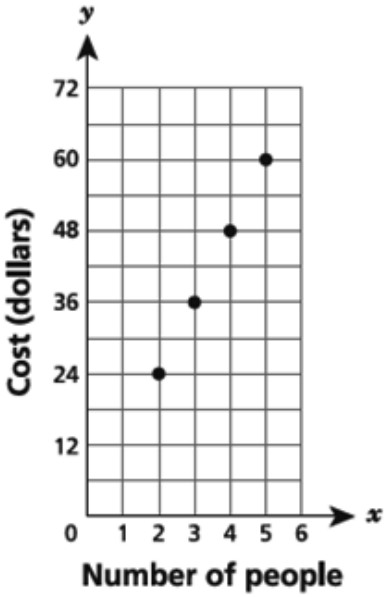
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

Soplash zone = 11.25 per person
Tube time = 12 per person
The difference is $.75 between the 2 companies.

Score Credit 1 (out of 3 credits)

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

- The unit rate for each company is correctly determined, with the difference between the rates provided.
- However, the explanation is incomplete, it is unclear how the unit rates were determined, and the total costs and difference between the total costs are not addressed.

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

GUIDE PAPER 10

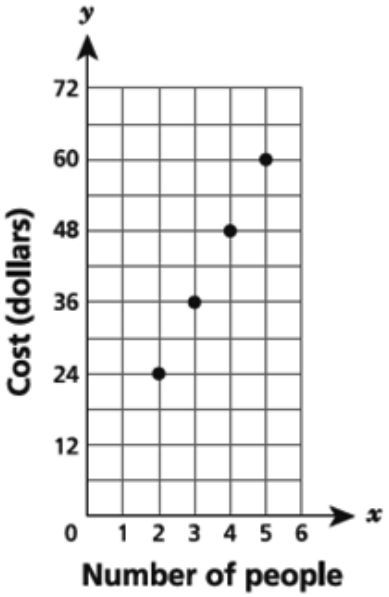
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

It would be about 87 0r 90 something dollors and for the graph it would be 80 the differents is 10 or less.

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 solution is provided with incorrect reasoning.

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

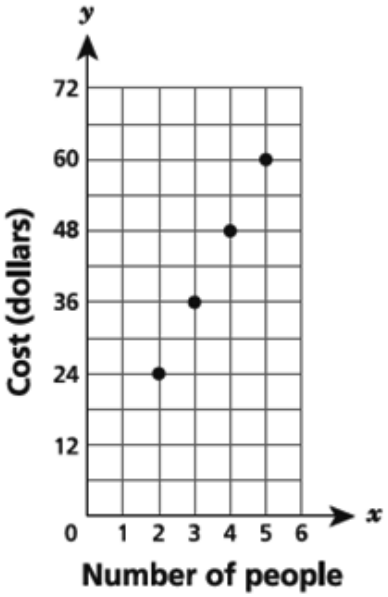
48

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	$33.75
4	$45.00
5	$56.25
6	$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

The difference between 8 friends tubing between the two companies is $6

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 difference in cost for 8 people to go tubing is provided, with no explanation.

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

Grade 8
Mathematics

Scoring Leader Materials
2026 Training Set