Pennsylvania PSSA 2019 Grade 7 Math

Reference Materials
Page 2

Exam & Answer Key Materials
Pages 3 - 37

Grade 7 Formula Sheet

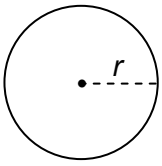
Formulas that you may need on this test are found below.
You may refer back to this page at any time during the mathematics test.
You may use calculator π or the number 3.14 as an approximation of π.

2019
Grade 7

Simple Interest

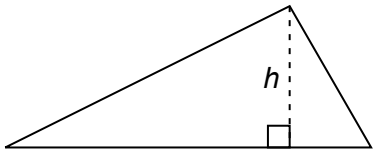
$I = Prt$

Circle



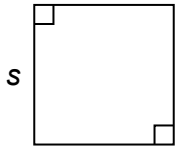
$C = 2\pi r$ $A = \pi r^2$

Triangle



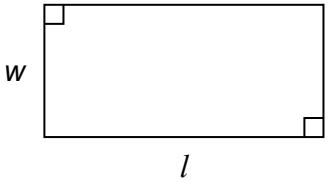
$A = \frac{1}{2}bh$

Square



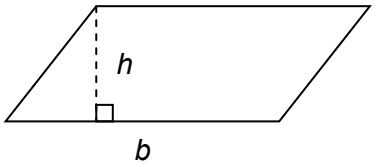
$A = s^2$

Rectangle



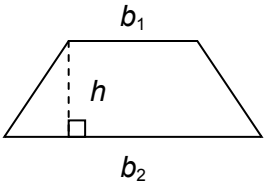
$A = lw$ $P = 2l + 2w$

Parallelogram



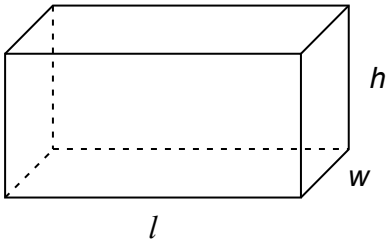
$A = bh$

Trapezoid



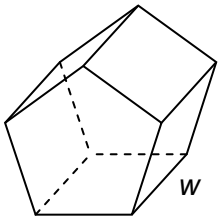
$A = \frac{1}{2}h(b_1 + b_2)$

Rectangular Prism



$V = lwh$ $SA = 2lw + 2lh + 2wh$

Polygonal Prism

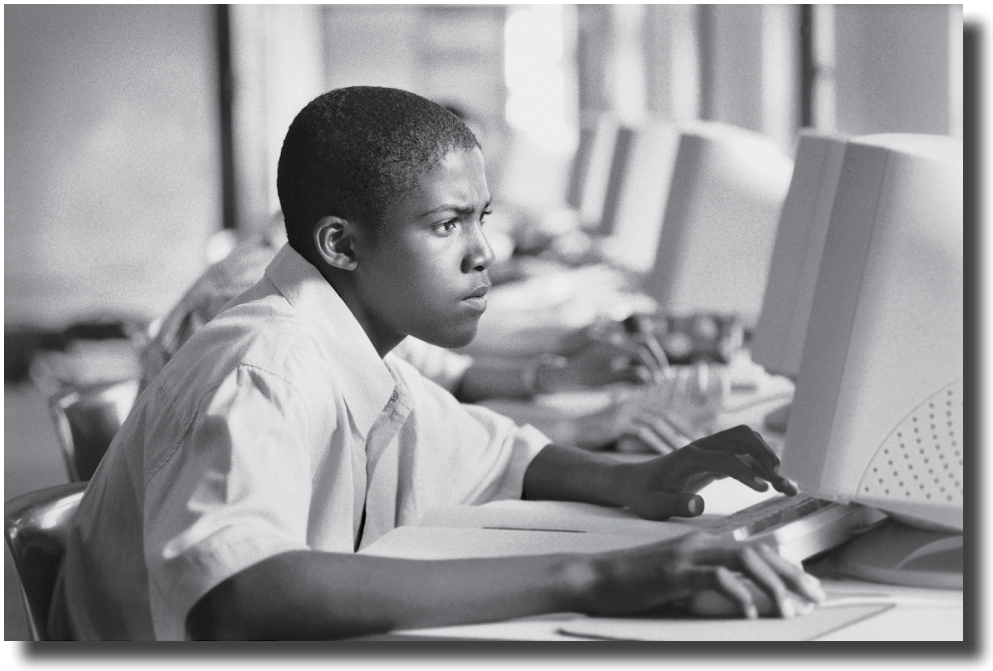


$V = Bw$, where B = area of the base
$SA = Pw + 2B$, where P = perimeter of base

pennsylvania
DEPARTMENT OF EDUCATION

The Pennsylvania System of School Assessment

Mathematics Item and Scoring Sampler



2019–2020
Grade 7

Pennsylvania Department of Education Bureau of Curriculum, Assessment and Instruction—September 2019

General Description of Scoring Guidelines for Mathematics Open-Ended Questions

4— The response demonstrates a *thorough* understanding of the mathematical concepts and procedures required by the task.

The response provides correct answer(s) with clear and complete mathematical procedures shown and a correct explanation, as required by the task. Response may contain a minor "blemish" or omission in work or explanation that does not detract from demonstrating a *thorough* understanding.

3— The response demonstrates a *general* understanding of the mathematical concepts and procedures required by the task.

The response and explanation (as required by the task) are mostly complete and correct. The response may have minor errors or omissions that do not detract from demonstrating a *general* understanding.

2— The response demonstrates a *partial* understanding of the mathematical concepts and procedures required by the task.

The response is somewhat correct with *partial* understanding of the required mathematical concepts and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

1— The response demonstrates a *minimal* understanding of the mathematical concepts and procedures required by the task.

0— The response has no correct answer and *insufficient* evidence to demonstrate any understanding of the mathematical concepts and procedures required by the task for that grade level.

Response may show only information copied from the question.

Special Categories within zero reported separately:

Blank.....Blank, entirely erased, entirely crossed out, or consists entirely of whitespace

Refusal.....Refusal to respond to the task

Off Task.....Makes no reference to the item but is not an intentional refusal

Foreign Language.....Written entirely in a language other than English

Illegible .....Illegible or incoherent

MATHEMATICS TEST DIRECTIONS

On the following pages are the mathematics questions.

- You may not use a calculator for question 1. You may use a calculator for all other questions on this test.

Directions for Multiple-Choice Questions:

Some questions will ask you to select an answer from among four choices.

For the multiple-choice questions:

- First solve the problem on scratch paper.
- Choose the correct answer and record your choice in the answer booklet.
- If none of the choices matches your answer, go back and check your work for possible errors.
- Only one of the answers provided is the correct response.

Directions for Open-Ended Questions:

Some questions will require you to write your response.

For the open-ended questions:

- These questions have more than one part. Be sure to read the directions carefully.
- You cannot receive the highest score for an open-ended question without completing all tasks in the question. For example, if the question asks you to show your work or explain your reasoning, be sure to show your work or explain your reasoning in the space provided.
- If the question does **not** ask you to show your work or explain your reasoning, you may use the space provided, but only those parts of your response that the question specifically asks for will be scored.
- Write your response in the appropriate location within the response box in the answer booklet. Some answers may require graphing, plotting, labeling, drawing, or shading. If you use scratch paper, be sure to transfer your final response and any needed work or reasoning to the answer booklet.

Question 1 in this sampler is to be solved without the use of a calculator.

MULTIPLE-CHOICE ITEMS

1. An expression is shown below.

$$5 \bullet (^{-}7)^2 \div {}^{-}7$$

What is the value of the expression?

A. $^{-}35$

B. $^{-}10$

C. 10

D. 35

Item Information	
Alignment	A-N.1.1.3
Answer Key	A
Depth of Knowledge	1
p-value A	46% (correct answer)
p-value B	14%
p-value C	12%
p-value D	28%
Option Annotations	A. correct B. uses $^{-}7(2)$ instead of $(^{-}7)^2$ and makes sign error C. uses $^{-}7(2)$ instead of $(^{-}7)^2$ D. makes sign error

A calculator is permitted for use in solving questions 2–17 in this sampler.

2. Trenton and Maria record how much dry food their pets eat on average each day.

- Trenton's pet: $\frac{4}{5}$ cup of dry food
- Maria's pet: 1.25 cups of dry food

Based on these averages, how many more cups of dry food will Maria's pet have eaten than Trenton's pet will have eaten over 2 seven-day weeks?

A. 0.9 cup

B. $6\frac{3}{10}$ cups

C. $11\frac{1}{5}$ cups

D. 17.5 cups

Item Information	
Alignment	A-N.1.1
Answer Key	B
Depth of Knowledge	2
p-value A	13%
p-value B	61% (correct answer)
p-value C	12%
p-value D	14%
Option Annotations	A. calculates the difference after 2 days B. correct C. calculates the amount of dry food Trenton's pet eats after 2 weeks D. calculates the amount of dry food Maria's pet eats after 2 weeks

3. A tank contains 2,450 gallons of fuel. The changes in the number of gallons of fuel in the tank over three days are listed below.

$$^{-}1{,}208 \quad +790 \quad ^{-}514$$

How many gallons of fuel are in the tank at the end of the three days?

A. 62

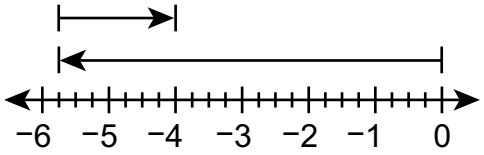
B. 728

C. 1,518

D. 3,382

Item Information	
Alignment	A-N.1.1.1
Answer Key	C
Depth of Knowledge	1
p-value A	8%
p-value B	12%
p-value C	72% (correct answer)
p-value D	8%
Option Annotations	A. subtracts all 3 values, resulting in $^{-}62$; makes the answer positive, realizing the tank could not hold a negative quantity B. tries to subtract all 3 values, but recognizes the negative result, so subtracts the sum of 1,208 and 514 from 2,450 C. correct D. uses the opposite operation of what each sign indicates, finding 2,450 + 1,208 – 790 + 514

4. A number line diagram is shown below.



Which expression is represented by the number line diagram?

A. $^{-}5.75 + 4$

B. $^{-}5.75 + 1.75$

C. $^{-}5.75 + (^{-}4)$

D. $^{-}5.75 + (^{-}1.75)$

Item Information	
Alignment	A-N.1.1.2
Answer Key	B
Depth of Knowledge	2
p-value A	13%
p-value B	50% (correct answer)
p-value C	29%
p-value D	8%
Option Annotations	A. uses +4 since the arrow stops at $^{-}4$, but knows addition moves to the right B. correct C. uses $^{-}4$ since that is where the arrow stops D. reasons that 1.75 is negative since the arrows are to the left of 0

5. Mr. Lockhart is digging a trench to put in the new school sprinkler system. Every $\frac{1}{4}$ hour, the length of his trench increases by $\frac{2}{3}$ foot. By how much does the length, in feet, of Mr. Lockhart's trench increase each hour?

A. $\frac{1}{6}$

B. $\frac{3}{7}$

C. $\frac{11}{12}$

D. $\frac{8}{3}$

Item Information	
Alignment	A-R.1.1.1
Answer Key	D
Depth of Knowledge	2
p-value A	24%
p-value B	11%
p-value C	16%
p-value D	49% (correct answer)
Option Annotations	A. multiplies $\frac{1}{4}$ and $\frac{2}{3}$ B. adds numerators and denominators C. adds the two fractions D. correct

6. Gordon made a scale drawing of a bedroom. The table below shows the actual widths and the scaled widths for some objects in Gordon's drawing.

Bedroom Drawing

Object	Actual Width (feet)	Scaled Width (inches)
bed	5	2
door	3	1.5
floor	10	5
table	2	1

Gordon made a mistake in his scale drawing. For which object did Gordon **not** use the same scale as he did for the other objects?

A. bed

B. door

C. floor

D. table

Item Information	
Alignment	A-R.1.1.2
Answer Key	A
Depth of Knowledge	2
p-value A	62% (correct answer)
p-value B	21%
p-value C	9%
p-value D	8%
Option Annotations	A. correct B. identifies the object with a scaled width that is not a whole number C. identifies the object with the largest difference between the actual and scaled widths D. identifies the object with the smallest difference between the actual and scaled widths

7. The table below shows the number of baskets Javier attempted and the number of baskets he made during his first three basketball games this season.

Javier's Basketball Games

Game	Baskets Attempted	Baskets Made
1	10	4
2	20	8
3	25	15

Which statement correctly describes the relationship between the number of baskets Javier attempted and the number of baskets he made during each game?

A. The relationship is proportional. For every 5 baskets Javier attempted each game, he made 2 baskets.

B. The relationship is proportional. For every 5 baskets Javier attempted each game, he made 3 baskets.

C. The relationship is not proportional because the ratio of the number of baskets attempted to the number of baskets made is not constant.

D. The relationship is not proportional because the number of baskets attempted from game to game increases more than the number of baskets made.

Item Information	
Alignment	A-R.1.1.2
Answer Key	C
Depth of Knowledge	2
p-value A	16%
p-value B	9%
p-value C	59% (correct answer)
p-value D	16%
Option Annotations	A. ignores game 3 B. only considers game 3 C. correct D. thinks the difference between the number of baskets attempted has to be the same as the difference between the number of baskets made

8. Anna opened a bank account. She adds the same amount of money to her account each month. The table below shows the amounts of money in her account at the ends of certain numbers of months.

Anna's Bank Account

Month	Amount
3	$45
5	$75
12	$180
15	$225

How much money does Anna add to her bank account each month?

A. $10

B. $12

C. $14

D. $15

Item Information	
Alignment	A-R.1.1.3
Answer Key	D
Depth of Knowledge	2
p-value A	4%
p-value B	3%
p-value C	4%
p-value D	89% (correct answer)
Option Annotations	A. calculates (75 – 45) ÷ 3 B. calculates (225 – 45) ÷ 15 C. calculates (45 – 3) ÷ 3 D. correct

9. Ms. Garcia drove from her house to her sister's house. The distance (y), in miles, she drove based on the time (x), in hours, is graphed on a coordinate grid. Her drive is represented by the line segment with endpoints at (0, 0) and ($2\frac{1}{2}$, 120). Based on the point on the graph with an x-coordinate of 1, which statement **must** be true?

A. Ms. Garcia drove 1 mile in 48% of an hour.

B. Ms. Garcia drove at a unit rate of 48 miles per hour.

C. Ms. Garcia drove from her house to her sister's house in 1 hour.

D. Ms. Garcia drove $\frac{1}{48}$ of the distance from her house to her sister's house.

Item Information	
Alignment	A-R.1.1.5
Answer Key	B
Depth of Knowledge	2
p-value A	15%
p-value B	56% (correct answer)
p-value C	17%
p-value D	12%
Option Annotations	A. misinterprets constant of proportionality B. correct C. thinks the point at (1, 48) represents the total trip D. misinterprets unit rate

10. An art dealer purchased a painting 5 years ago for $2,000. Now, the value of the painting has increased by 75%. What is the value of the painting now?

A. $2,375

B. $2,750

C. $3,000

D. $3,500

Item Information	
Alignment	A-R.1.1.6
Answer Key	D
Depth of Knowledge	2
p-value A	8%
p-value B	27%
p-value C	7%
p-value D	58% (correct answer)
Option Annotations	A. adds 75 × 5 to 2,000 B. adds 75% of 1,000 to 2,000 C. multiplies 2,000 by 150% D. correct

11. Simplify: $4x - 5.2y + 6y + 7.9x - 8x$

A. $4.7xy$

B. $^{-}1.3x + 6y$

C. $3.9x + 0.8y$

D. $19.9x + 11.2y$

Item Information	
Alignment	B-E.1.1.1
Answer Key	C
Depth of Knowledge	1
p-value A	17%
p-value B	7%
p-value C	55% (correct answer)
p-value D	21%
Option Annotations	A. adds all terms and multiplies variables B. subtracts 5.2 from the coefficient of the *x*-terms instead of subtracting it from the coefficients of the *y*-term C. correct D. does not consider the signs of the coefficients of the *x*-terms and the *y*-terms

12. A painter charges $25 per hour plus $50 to paint a house. The painter painted a house for less than $725. Which inequality can be used to determine all the possible numbers of hours (x) it took the painter to paint the house?

A. $25x + 50 < 725$

B. $25x + 50 > 725$

C. $50x + 25 < 725$

D. $50x + 25 > 725$

Item Information	
Alignment	B-E.2.2.2
Answer Key	A
Depth of Knowledge	2
p-value A	60% (correct answer)
p-value B	24%
p-value C	9%
p-value D	7%
Option Annotations	A. correct B. confuses < with > C. switches the rate and the fixed cost D. confuses < with > and switches the rate and the fixed cost

13. Which statement **best** describes a random sample of all students in a middle school?

A. Of all the students who are on the track team, the first three to finish a race are selected.

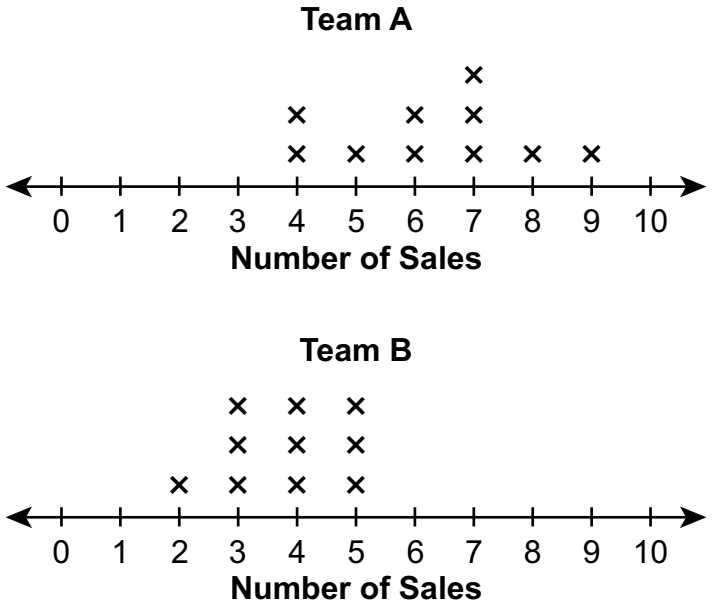
B. Of all the students who are in the drama club, every third student on the roster is selected.

C. Of all the students who complete an assignment, the first, third, and tenth students are selected.

D. Of all the students who attend a school-wide assembly, those sitting in every third seat are selected.

Item Information	
Alignment	D-S.1.1.1
Answer Key	D
Depth of Knowledge	1
p-value A	11%
p-value B	6%
p-value C	15%
p-value D	68% (correct answer)
Option Annotations	A. neither the selection process (three fastest) nor the pool of students (track team) is random B. the selection process is random, but the pool of students (drama club) is not random C. the selection process is somewhat random (slightly favors the students who are quickest to finish), but the pool of students (those who complete an assignment) is not random D. correct

14. Two teams sold the same item for a fundraiser. The number of sales by each team member is shown in the line plots below.



Based on the line plots, which statement is true?

A. No team member from team B had more sales than any team member from team A.

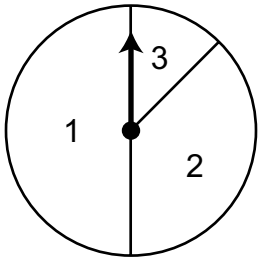
B. Every team member from team A had more sales than 50% of the team members from team B.

C. At least one team member from each team had the median number of sales for his or her team.

D. The range for the number of sales for team A is equal to the greatest number of sales for team B.

Item Information	
Alignment	D-S.2.1
Answer Key	D
Depth of Knowledge	2
p-value A	15%
p-value B	15%
p-value C	29%
p-value D	41% (correct answer)
Option Annotations	A. interprets the measure of center to be absolute comparisons (i.e., since the median/mean is lower, every data point must be lower) OR only compares data points based on "rank" (i.e., the first data point in B is lower than the first data point in A, etc.) B. either incorrectly identifies the median for team B as less than 4 OR incorrectly interprets "more" as "at least" C. does not recognize that the median for team A, which is 6.5, cannot be a number of sales for a team member D. correct

15. Pat is conducting a probability experiment using the spinner pictured below.



Pat spins the spinner one time. Which statement about the result of the spin is true?

A. Region 1 is certain.

B. Region 3 is impossible.

C. Region 2 is more likely than region 3.

D. Region 1 and region 2 are equally likely.

Item Information	
Alignment	D-S.3.1.1
Answer Key	C
Depth of Knowledge	2
p-value A	11%
p-value B	7%
p-value C	71% (correct answer)
p-value D	11%
Option Annotations	A. confuses the most likely outcome with certainty B. thinks the least likely outcome is impossible C. correct D. thinks region 2, which is most of one half, is equally likely as region 1, which is the other half

16. Using data from car sales, probabilities for the color of a car sold were calculated. The probabilities for two colors are listed below.

- The probability a car sold is white is 0.21.
- The probability a car sold is black is 0.19.

Based on these probabilities, how many of the next 200 cars sold are likely to be white and how many are likely to be black?

A. white: 11
black: 10

B. white: 21
black: 19

C. white: 42
black: 38

D. white: 80
black: 80

Item Information	
Alignment	D-S.3.2.1
Answer Key	C
Depth of Knowledge	2
p-value A	9%
p-value B	19%
p-value C	65% (correct answer)
p-value D	7%
Option Annotations	A. takes $\frac{1}{2}$ of 21 and 19 and rounds B. uses numbers from probabilities without applying them to 200 C. correct D. adds 0.21 and 0.19 to get 0.40, finds the probability out of 200, which is 80, and uses 80 for both colors

OPEN-ENDED QUESTION

17. A piece of steel is in the shape of a triangle. One side of the triangle is 8 inches long. The lengths of the other two sides are equal and each is less than 8 inches long.

A. What type of triangle **must** describe the shape of the piece of steel?

B. What are possible values for each of the three angle measures, in degrees, of the vertices of the triangle?

_____ _____ _____

Go to the next page to finish question 17.

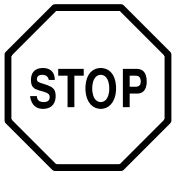
GO ON

17. ***Continued.*** Please refer to the previous page for task explanation.

Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.

C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.

After you have checked your work, close your answer booklet and test booklet so your teacher will know you are finished.



Item-Specific Scoring Guideline

#17 Item Information

Alignment	C-G.1	**Depth of Knowledge**	3	**Mean Score**	0.87

Assessment Anchor this item will be reported under:

M07.C-G.1—Demonstrate an understanding of geometric figures and their properties.

Specific Anchor Descriptor addressed by this item:

M07.C-G.1.1—Describe and apply properties of geometric figures.

Scoring Guide

Score	In this item, the student . . .
4	Demonstrates a thorough understanding of geometric figures and their properties by correctly solving problems and clearly explaining procedures.
3	Demonstrates a general understanding of geometric figures and their properties by correctly solving problems and clearly explaining procedures with only minor errors or omissions.
2	Demonstrates a partial understanding of geometric figures and their properties by correctly performing a significant portion of the required task.
1	Demonstrates minimal understanding of geometric figures and their properties.
0	The response has no correct answer and insufficient evidence to demonstrate any understanding of the mathematical concepts and procedures as required by the task. Response may show only information copied from the question.

Top-Scoring Student Response and Training Notes

Score	Description
4	Student earns 4 points.
3	Student earns 3.0–3.5 points.
2	Student earns 2.0–2.5 points.
1	Student earns 0.5–1.5 points. OR Student demonstrates minimal understanding of geometric figures and their properties.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.

Top-Scoring Response

Part A (1 point):

1 point for correct answer

What?	Why?
isosceles	

Part B (1 point):

1 point for correct answer

What?	Why?
Answers may vary. Accept any set of 3 values for which the sum is 180, exactly two values are equal to each other, and the unique value is the greatest value in the set. **Sample Response:** 100 (degrees), 40 (degrees), 40 (degrees)	

Part C (2 points):

1 point for correct answer

OR $\frac{1}{2}$ point for only 1 correct answer and no incorrect answers

1 point for correct and complete explanation

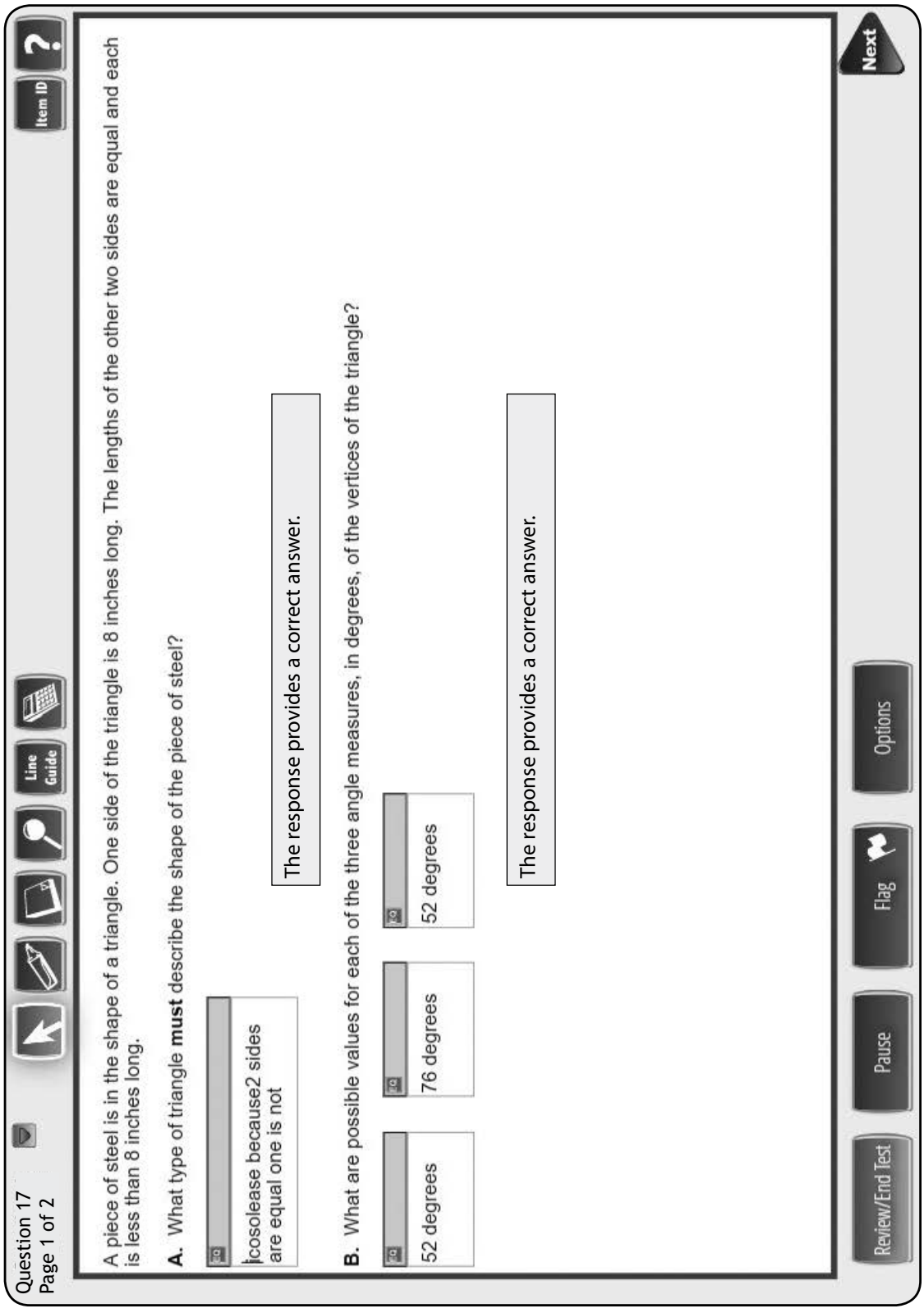
OR $\frac{1}{2}$ point for correct but incomplete explanation

What?	Why?
4 (inches). **AND** 5 (inches)	**Sample Explanation:** The sum of the two unknown sides has to be greater than 6 or else it can't create a triangle. The only whole numbers that work are 4 and 5. **OR equivalent**

STUDENT RESPONSE

Response Score: 4 points

PARTS A AND B



PART C

Question 17
Page 2 of 2
Item ID
Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.
C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.
5 inches and 5 inches
or
4 inches and 4 inches
I know that in a triangle the measurements of the 2 smaller sides nees to aqdd up to be longer than the longest side and in this problem thay need to be equal so 5 + 5 = 10 > 6 or 4 + 4 = 8 > 6. 3 + 3, 2 + 2, or 1 + 1 would not work be cause the do not add up to be greatr than 6 inches
334 / 1000
The response provides the two correct lengths and a correct and complete explanation.
Review/End Test
Pause
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STUDENT RESPONSE

Response Score: 3 points

17. A piece of steel is in the shape of a triangle. One side of the triangle is 8 inches long. The lengths of the other two sides are equal and each is less than 8 inches long.

A. What type of triangle **must** describe the shape of the piece of steel?

The triangle is isosolece.

The response provides a correct answer.

B. What are possible values for each of the three angle measures, in degrees, of the vertices of the triangle?

The response provides an incorrect answer.

45° 50° 45°

Go to the next page to finish question 17.

GO ON

17. ***Continued.*** Please refer to the previous page for task explanation.

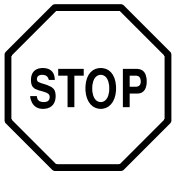
Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.

C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.

The possible lengths of the unknown sides would have to be either 5 in or 4 in. This is because they are the only two numbers less then six that will add up to a number greater than six.

The response provides the two correct lengths and a correct and complete explanation.

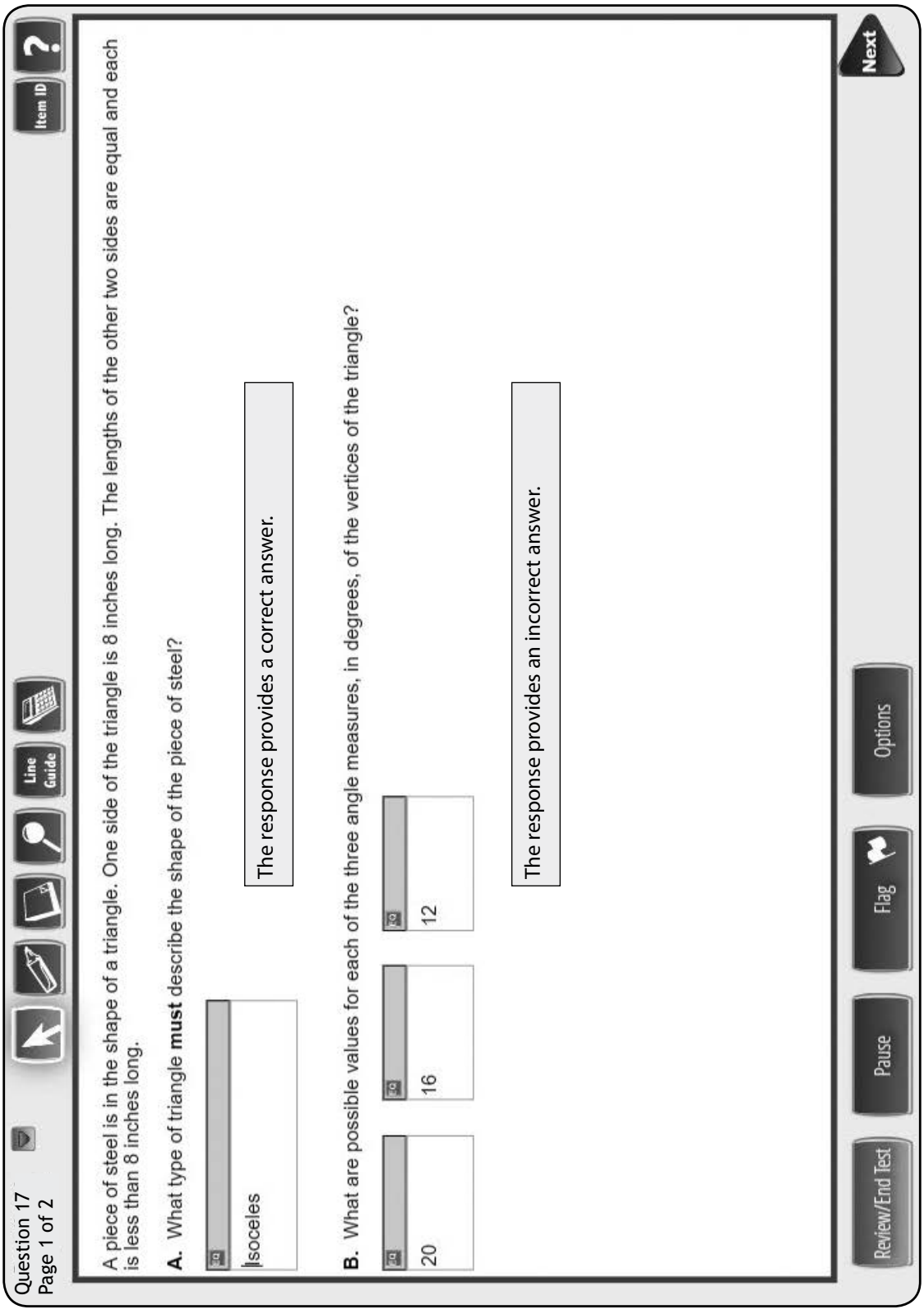
After you have checked your work, close your answer booklet and test booklet so your teacher will know you are finished.



STUDENT RESPONSE

Response Score: 2 points

PARTS A AND B



PART C

Question 17
Page 2 of 2
Item ID
Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.
C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.
4 and 4 or 5 and 5 because the sides are the same and 5 and 5 are the same and less then 6 inches long, so 5 and 5 or 4 and 4 can be the missing lengths
152 / 1000
The response provides the two correct lengths and an incorrect explanation.
Review/End Test
Pause
Flag
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STUDENT RESPONSE

Response Score: 1 point

17. A piece of steel is in the shape of a triangle. One side of the triangle is 8 inches long. The lengths of the other two sides are equal and each is less than 8 inches long.

A. What type of triangle **must** describe the shape of the piece of steel?

A right triangle

The response provides an incorrect answer.

B. What are possible values for each of the three angle measures, in degrees, of the vertices of the triangle?

The response provides a correct answer.

4° 172° 4°

Go to the next page to finish question 17.

GO ON

17. ***Continued.*** Please refer to the previous page for task explanation.

Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.

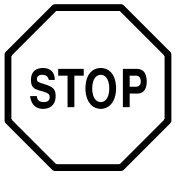
C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.

The possible lengths are 1 inch, 2 inches, 3 inches, 4 inches, or 5 inches.

The process I used was I named all the possible whole numbers in inches, that were less than 6 inches.

The response provides incorrect answers and an incorrect explanation.

After you have checked your work, close your answer booklet and test booklet so your teacher will know you are finished.



STUDENT RESPONSE

Response Score: 0 points

PARTS A AND B

PART C

Question 17
Page 2 of 2
Item ID
Another piece of steel is also in the shape of a triangle. One side of the triangle is 6 inches long. The lengths of the other two sides are equal and each is less than 6 inches long. The lengths of the unknown sides of the triangle are whole numbers of inches.
C. What are all the possible lengths, in inches, of the unknown sides of the triangle? Explain the process you used to find all the possible lengths.
The numbers could be 171 inch, 6 in, & three inches. How I found them is I added 6 + 3 + 171 = 180 degrees. 180 degrees is the measure for the triangle.
152 / 1000
The response provides incorrect answers and an incorrect explanation.
Review/End Test
Pause
Flag
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MATHEMATICS—SUMMARY DATA

MULTIPLE-CHOICE

Sample Number	Alignment	Answer Key	Depth of Knowledge	*p*-values A	*p*-values B	*p*-values C	*p*-values D
1	A-N.1.1.3	A	1	46%	14%	12%	28%
2	A-N.1.1	B	2	13%	61%	12%	14%
3	A-N.1.1.1	C	1	8%	12%	72%	8%
4	A-N.1.1.2	B	2	13%	50%	29%	8%
5	A-R.1.1.1	D	2	24%	11%	16%	49%
6	A-R.1.1.2	A	2	62%	21%	9%	8%
7	A-R.1.1.2	C	2	16%	9%	59%	16%
8	A-R.1.1.3	D	2	4%	3%	4%	89%
9	A-R.1.1.5	B	2	15%	56%	17%	12%
10	A-R.1.1.6	D	2	8%	27%	7%	58%
11	B-E.1.1.1	C	1	17%	7%	55%	21%
12	B-E.2.2.2	A	2	60%	24%	9%	7%
13	D-S.1.1.1	D	1	11%	6%	15%	68%
14	D-S.2.1	D	2	15%	15%	29%	41%
15	D-S.3.1.1	C	2	11%	7%	71%	11%
16	D-S.3.2.1	C	2	9%	19%	65%	7%

OPEN-ENDED

Sample Number	Alignment	Points	Depth of Knowledge	Mean Score
17	C-G.1	4	3	0.87