

## ISTEP+: Grade 3

### Mathematics

Companion to Released Part 1 Applied Skills  
(Open-Ended) Items and Scoring Notes: Online Examples

## Introduction

When the *ISTEP+* Spring 2016 test was administered to Indiana students in Grades 3-8 and 10, the Math Part 1 Applied Skills tests were only offered in a Paper/Pencil format. Beginning in Spring 2017, Math Part 1 Applied Skills assessments will be available through the online testing platform. In order to help teachers, students, and parents better understand how students can use the online testing platform to show their work in math, the Indiana Department of Education has created this document (as a companion to the Released Items and Scoring Notes document), which consists of sample student responses to the 2016 Math Part 1 Applied Skills items in an online format.

The Show All Work box gives students a place to show their thought processes. Scorers do not expect students to show computational work (such as regrouping or the long division process) in the online platform, but rather to simply list or describe the steps that they took in to solve the problem. For example, if a student uses an equation to find an answer, he can simply type in that equation. If the student were to draw a picture to solve the problem, he could describe what he drew using words in the box.

This document should be used in correlation with the Released Items and Scoring Notes document, which also contains descriptions of types of questions, a summary of scoring rules, a copy of math rubrics, and student anchor papers (sample student responses) in Paper/Pencil format.

Item #1  
Constructed-Response Online  
Making a Play Area

**Question 1, Sample A – Measurement Score Point 2; Process Score Point 2**

Jack is making a rectangular play area for his puppy.

**Part A**

Jack looks at three sizes of play areas. Fill in the missing length, width, and area of the play areas in the table.

$$\text{Area of rectangle} = l \times w$$

**Play Area Sizes**

	Length (feet)	Width (feet)	Area (square feet)
Play Area A	12	6	72
Play Area B	9	8	72
Play Area C	11	5	55

**Part B**

Jack makes a play area that has

- a length equal to 1 foot less than the length of Play Area B and
- an area equal to 56 square feet.

What is the width, in feet, of the play area Jack makes?

Show All Work



$9 - 1 = 8$   
 $56 \div 8$

▼ Math symbols

+	-	×	÷
=	<	>	≠
\$	°	?	

Answer 7 feet

*Scoring Notes: The response demonstrates a thorough understanding of finding the area of rectangles by correctly completing the table. The response demonstrates a thorough understanding of reasoning quantitatively by finding the correct width of the play area with a valid process. This response receives two points for content and two points for process.*

**Question 1, Sample C – Measurement Score Point 1, Process Score Point 2**

Jack is making a rectangular play area for his puppy.

**Part A**

Jack looks at three sizes of play areas. Fill in the missing length, width, and area of the play areas in the table.

$$\text{Area of rectangle} = l \times w$$

**Play Area Sizes**

	Length (feet)	Width (feet)	Area (square feet)
Play Area A	12	4	72
Play Area B	9	8	72
Play Area C	11	5	55

**Part B**

Jack makes a play area that has

- a length equal to 1 foot less than the length of Play Area B and
- an area equal to 56 square feet.

What is the width, in feet, of the play area Jack makes?

Show All Work



$9 - 1 = 8 \times 7 = 56$

▼ Math symbols

+	-	×	÷
=	<	>	≠
\$	°	?	

Answer 7 feet

*Scoring Notes: The response demonstrates a partial understanding of finding the area of rectangles by correctly finding two of the three values in the table. The response demonstrates a thorough understanding of reasoning quantitatively by finding the correct width of the play area with a valid process. This response receives one point for content and two points for process.*

**Question 1, Sample D – Measurement Score Point 1; Process Score Point 0**

Jack is making a rectangular play area for his puppy.

**Part A**

Jack looks at three sizes of play areas. Fill in the missing length, width, and area of the play areas in the table.

Area of rectangle =  $l \times w$

Play Area Sizes

	Length (feet)	Width (feet)	Area (square feet)
Play Area A	12	<input type="text" value="6"/>	72
Play Area B	<input type="text" value="12"/>	8	72
Play Area C	11	5	<input type="text" value="55"/>

**Part B**

Jack makes a play area that has

- a length equal to 1 foot less than the length of Play Area B and
- an area equal to 56 square feet.

What is the width, in feet, of the play area Jack makes?

Show All Work



8 ft. +  ft. +  ft.  =  ft.

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	$\square$
=	<	>	≠
\$	°	?	

Answer  feet

*Scoring Notes: The response demonstrates a partial understanding of finding the area of rectangles by correctly finding two of the three values in the table. The response demonstrates limited understanding of reasoning quantitatively by finding an incorrect width of the play area with an invalid process to find the width. This response receives one point for content and zero points for process.*

**Question 1, Sample E – Measurement Score Point 0; Process Score Point 1**

Jack is making a rectangular play area for his puppy.

**Part A**

Jack looks at three sizes of play areas. Fill in the missing length, width, and area of the play areas in the table.

$$\text{Area of rectangle} = l \times w$$

**Play Area Sizes**

	Length (feet)	Width (feet)	Area (square feet)
Play Area A	12	96	72
Play Area B	8	8	72
Play Area C	11	5	27

**Part B**

Jack makes a play area that has

- a length equal to 1 foot less than the length of Play Area B and
- an area equal to 56 square feet.

What is the width, in feet, of the play area Jack makes?

Show All Work



$11 + 11 = 22$   
 $72 + 16 = 88$   
 $72 + 11 = 80$

▼ Math symbols

+	-	×	÷
=	<	>	≠
\$	°	?	

Answer  feet

*Scoring Notes: The response demonstrates a limited understanding of finding the area of rectangles as all three values in the table are incorrect. The response demonstrates a partial understanding of reasoning quantitatively by finding the correct width of the play area but with an invalid process. This response receives zero points for content and one point for process.*

**Question 1, Sample F – Measurement Score Point 0; Process Score Point 0**

Jack is making a rectangular play area for his puppy.

**Part A**

Jack looks at three sizes of play areas. Fill in the missing length, width, and area of the play areas in the table.

Area of rectangle =  $l \times w$

Play Area Sizes

	Length (feet)	Width (feet)	Area (square feet)
Play Area A	12	40	72
Play Area B	132	8	72
Play Area C	11	5	172

**Part B**

Jack makes a play area that has

- a length equal to 1 foot less than the length of Play Area B and
- an area equal to 56 square feet.

What is the width, in feet, of the play area Jack makes?

Show All Work



$8 \times 5 = 40$   
 $12 \times 11 = 132$   
 $40 + 132 = 172$   
  
 $10 \times 11 = 110$   
 $2 \times 11 = 22$   
 $110 + 22 = 132$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	-
=	<	>	≠
\$	°	?	

Answer  feet

*Scoring Notes: The response demonstrates a limited understanding of finding the area of rectangles as all three values in the table are incorrect. The response demonstrates a limited understanding of reasoning quantitatively by finding the incorrect width of the play area with an invalid process. This response receives zero points for content and zero points for process.*



Item #2

Constructed-Response Online

The Yard Sale

Note: This item is not available for online samples.

Item #3  
Constructed-Response Online  
Building a Dog House

**Question 3, Sample A – Data Analysis Score Point 2; Process Score Point 2**

Mike builds a doghouse. He uses

- 10 boards,
- 2 nails for every board used,
- and 6 shingles for every 2 boards used.

**Part A**

How many shingles does Mike use?

Show All Work



$s = \textit{shingles}$   
 $b = \textit{boards}$   
 2 boards  
 6 shingles  
 46      66      86  
 125    185    245  
 106  
 305

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	:
=	<	>	≠
\$	°	?	

Answer  shingles

**Part B**

Complete the picture graph to show the number of boards, nails, and shingles Mike uses to build the doghouse.

**Doghouse**

Item	Number of Items
Boards	<input type="text" value="xx"/>
Nails	<input type="text" value="xxxx"/>
Shingles	<input type="text" value="xxxxxxx"/>

KEY	
$x$	=5 items

*Scoring Notes: The response demonstrates a thorough understanding of data analysis by creating a valid picture graph. The response demonstrates a thorough understanding of reasoning quantitatively by finding a correct number of shingles with a valid process. This response receives two points for content and two points for process.*

**Question 3, Sample B – Data Analysis Score Point 2, Process Score Point 0**

Mike builds a doghouse. He uses

- 10 boards,
- 2 nails for every board used,
- and 6 shingles for every 2 boards used.

**Part A**

How many shingles does Mike use?

Show All Work



$$8 \times 6 = 44$$
$$60 - 16 = 44$$

Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	-
=	<	>	≠
\$	°	?	

Answer  shingles

**Part B**

Complete the picture graph to show the number of boards, nails, and shingles Mike uses to build the doghouse.

**Doghouse**

Item	Number of Items
Boards	<input type="text" value="xx"/>
Nails	<input type="text" value="xxxx"/>
Shingles	<input type="text" value="xxxxxxxx"/>

KEY
$x = 5$ items

*Scoring Notes: The response demonstrates a thorough understanding of data analysis by creating a valid picture graph based on the incorrect number of shingles that the student found in Part A. The response demonstrates a limited understanding of reasoning quantitatively by finding an incorrect number of shingles with an invalid process. This response receives two point for content and zero points for process.*

**Question 3, Sample C – Data Analysis Score Point 1; Process Score Point 2**

Mike builds a doghouse. He uses

- 10 boards,
- 2 nails for every board used,
- and 6 shingles for every 2 boards used.

**Part A**

How many shingles does Mike use?

Show All Work



6 then 12 then 18 then 24 then 30

▼ Math symbols

+	-	×	÷
≡	□	(-)	·
=	<	>	≠
\$	°	?	

Answer  shingles

**Part B**

Complete the picture graph to show the number of boards, nails, and shingles Mike uses to build the doghouse.

**Doghouse**

Item	Number of Items
Boards	<input type="text" value="xx"/>
Nails	<input type="text" value="xx"/>
Shingles	<input type="text" value="xxxxxx"/>

**KEY**

$x = 5$  items

*Scoring Notes: This response demonstrates a partial understanding of data analysis by correctly creating the picture graph for only the Boards and Shingles. The response demonstrates a thorough understanding of reasoning quantitatively by finding the correct number of shingles with a valid process. This response receives one point for content and two points for process.*

**Question 3, Sample D – Data Analysis Score Point 1; Process Score Point 0**

Mike builds a doghouse. He uses

- 10 boards,
- 2 nails for every board used,
- and 6 shingles for every 2 boards used.

**Part A**

How many shingles does Mike use?

Show All Work



6 12 18 24 30 36 42 48 54 59

Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	·
=	<	>	≠
\$	°	?	

Answer  shingles

**Part B**

Complete the picture graph to show the number of boards, nails, and shingles Mike uses to build the doghouse.

Doghouse

Item	Number of Items
Boards	<input type="text" value="10"/>
Nails	<input type="text" value="20"/>
Shingles	<input type="text" value="59"/>

<b>KEY</b>
$x = 5$ items

*Scoring Notes: The response demonstrates a partial understanding of data analysis by placing the correct number of items in the picture graph, but the response did not follow the key when creating the picture graph. The response demonstrates a limited understanding of reasoning quantitatively by finding an incorrect number of shingles with an invalid process. This response receives one point for content and zero points for process.*

### Question 3, Sample E – Data Analysis Score Point 0; Process Score Point 2

Mike builds a doghouse. He uses

- 10 boards,
- 2 nails for every board used,
- and 6 shingles for every 2 boards used.

#### Part A

How many shingles does Mike use?

Show All Work



$$6 + 6 = 12 + 6 = 18 + 6 = 24 + 6 = 30$$
$$30 \times 2 = 60$$

Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	[ ]
=	<	>	≠
\$	°	?	

Answer  shingles

#### Part B

Complete the picture graph to show the number of boards, nails, and shingles Mike uses to build the doghouse.

Doghouse

Item	Number of Items
Boards	<input type="text" value="10"/>
Nails	<input type="text" value="60"/>
Shingles	<input type="text" value="30"/>

#### KEY

$x = 5$  items

*Scoring Notes: The response demonstrates a limited understanding of data analysis by creating an incorrect picture graph. The response demonstrates a thorough understanding of reasoning quantitatively by finding a correct number of shingles with a valid process. This response receives zero points for content and two points for process.*

Item #4  
Extended-Response Online  
Toothpick Shapes



### Question 4, Sample A – Measurement Score Point 3; Process Score Point 3

Mark places toothpicks end to end to make the sides of three shapes.

#### Part A

Shape A has 3 sides. Each side is 8 toothpicks long.

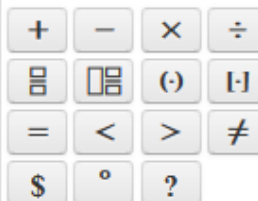
What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$$8 + 8 = 16$$
$$16 + 8 = 24$$

Math symbols



Answer  toothpicks

#### Part B

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

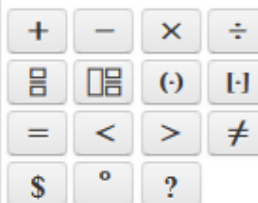
What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



$$6 \times 4 = 24$$

Math symbols



Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



6  
5 [ ] 5  
6

Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	-
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a thorough understanding of how to determine the perimeter of polygons with a valid setup in Parts A, B, and C. The response demonstrates a thorough understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Parts A, B, and C. This response receives three points for content and three points for process.*

**Question 4, Sample B – Measurement Score Point 3; Process Score Point 2**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$8 + 8 = 16 + 8 = 24$

Math symbols

+	-	×	÷
≡	□	(·)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



$\square = \square = \square = \square = \square = \square = \square$   
— $\square$   
— $\square$   
— $\square$   
— $\square$   
 $\square = \square = \square = \square = \square = \square = \square$   
1 2 3 4 5 6

Math symbols

+	-	×	÷
≡	□	(·)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



$$2 \times 1 + 2 \times 1 = 4$$
$$6 + 6 = 12 + 10 = 22$$

Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a thorough understanding of how to determine the perimeter of polygons with a valid setup in Parts A, B, C. The response demonstrates a partial understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Parts A and B but an incorrect number of toothpicks for Part C. This response receives three points for content and two points for process.*

### Question 4, Sample C – Measurement Score Point 2; Process Score Point 2

Mark places toothpicks end to end to make the sides of three shapes.

#### Part A

Shape A has 3 sides. Each side is 8 toothpicks long.

What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



8  
8      8

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\square \div \square$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

#### Part B

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



8  
8      8  
    8

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\square \div \square$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



6      5      6  
      5

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a partial understanding of how to determine the perimeter of polygons with a valid setup in Parts A and C only. The response demonstrates a partial understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Parts A and C only. This response receives two points for content and two points for process.*

**Question 4, Sample D – Measurement Score Point 2; Process Score Point 1**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$8 \times 3 = 24$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\square \div \square$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



$8 \times 4 = 32$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\square \div \square$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



$$\begin{aligned} 6 \times 2 &= 12 \\ 5 \times 2 &= 10 \\ 12 + 10 &= 22 \end{aligned}$$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	:
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a partial understanding of how to determine the perimeter of polygons with a valid setup in Parts A and C only. The response demonstrates a limited understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Part A only. This response receives two points for content and one point for process.*



**Question 4, Sample E – Measurement Score Point 1; Process Score Point 2**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$$8 \times 3 = 24$$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	
=	<	>	≠
\$	°	?	

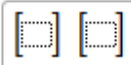
Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	
=	<	>	≠
\$	°	?	

Answer  toothpicks

### Part C

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work

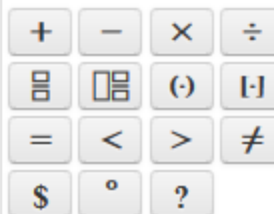


$$6 \times 4 = 24$$

$$6 \times 3 = 18$$

$$6 \times 2 = 12$$

Math symbols



Answer  toothpicks

*Scoring Notes: The response demonstrates a limited understanding of how to determine the perimeter of polygons with a valid setup in Part A only. The response demonstrates a partial understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Parts A and C only. This response receives one point for content and two points for process.*

**Question 4, Sample F – Measurement Score Point 1; Process Score Point 1**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

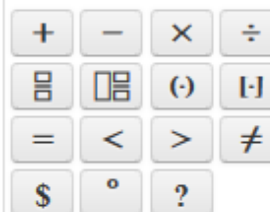
What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$$8 + 8 + 8 = 24$$

Math symbols



Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

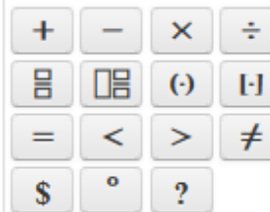
What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



$$8 + 8 + 8 + 8 = 32$$

Math symbols



Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



$$22 + 22 + 6 + 6 = 56$$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	-
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a limited understanding of how to determine the perimeter of polygons with a valid setup in Part a only. The response demonstrates a limited understanding of making sense of problems and persevering in solving those problems with a correct number of toothpicks in Part A only. This response receives one point for content and one point for process.*

**Question 4, Sample G – Measurement Score Point 0; Process Score Point 0**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



sape a 3  
sape B 4

7

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	·
=	<	>	≠
\$	°	?	

Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



$$\begin{aligned} 6 + 6 &= 12 \\ L &= 6 \\ W &= 12 \end{aligned}$$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	$\square$
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: The response demonstrates a limited or no understanding of how to determine the perimeter of polygons with an invalid setup for Parts A, B, and C. The response demonstrates limited or no understanding of making sense of problems and persevering in solving those problems with an incorrect number of toothpicks in Parts A, B, and C. This response receives zero points for content and zero points for process.*

**Question 4, Sample H – Measurement Score Point 0; Process Score Point 0**

Mark places toothpicks end to end to make the sides of three shapes.

**Part A**

Shape A has 3 sides. Each side is 8 toothpicks long.

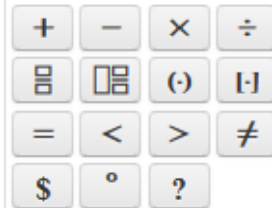
What is the PERIMETER, in toothpicks, of Shape A?

Show All Work



$$3 + 3 + 3 = \square$$
$$6 + 3 = 9$$

Math symbols



Answer  toothpicks

**Part B**

Mark makes Shape B using the same number of toothpicks used in Shape A. Shape B has 4 sides of equal length.

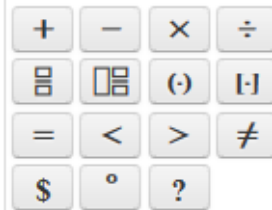
What is the LENGTH, in toothpicks, of each side of Shape B?

Show All Work



$$3 + 1$$

Math symbols



Answer  toothpicks

**Part C**

Mark uses 22 toothpicks to make Shape C. It is a rectangle that has a length of 6 toothpicks.

What is the WIDTH, in toothpicks, of Shape C?

$$\text{Perimeter of rectangle} = 2 \times l + 2 \times w$$

Show All Work



$$22 + 6 = 28$$

▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\frac{\square}{\square}$	(-)	
=	<	>	≠
\$	°	?	

Answer  toothpicks

*Scoring Notes: This response demonstrates limited or no understanding of how to determine the perimeter of polygons with an invalid setup for Parts A, B, and C. The response demonstrates limited or no understanding of making sense of problems and persevering in solving those problems with an incorrect number of toothpicks in Parts A, B, and C. This response receives zero points for content and zero points for process.*