Area and Perimeter Through Coordinate Geometry Internet Field Trip
Short-Answer Question Rubric

	2 points	**1 point**	**0 points**
Answering the Problem	You arrive at a correct answer.	You arrive at a partially correct answer.	Your answer was incorrect or not given at all.
Showing your Work	You follow the given directions in order to show how you solved the problem. All of the steps show correct math procedures.	You follow the given directions in an attempt to show how the problem was solved. Some of the steps show correct math procedures.	You make no attempt to show how you solved the problem, or all of the steps shown are incorrect.
Explaining & Interpreting your Answer	You explain how you solved the problem so correctly and completely that someone else can find the answer. When asked, you make true statements about the given answer.	You explain how you solved the problem, but leave out steps that are needed to guide the reader to the correct answer. When asked, you attempt to make true statements about the given answer.	Your explanations and interpretations are not correct, understood, or given.
Remember:	*A score of **two** means your work shows a complete understanding of the math concepts and procedures used in the problem.*	*A score of **one** means your work shows a partial understanding of the math concepts and procedures used in the task.*	*A score of **zero** means your work was completely incorrect, not understood, or that you gave no response at all.*

Checklist for Lesson:
Area and Perimeter Through Coordinate Geometry Internet Field Trip

☐   Choose a reasonable title for the coordinate graph

☐   Choose an appropriate scale/interval

☐   Label each the x- and y- axes

☐   Accurately plots and labels ordered pairs

☐   Calculates the area and the perimeter of rectangle/squares plotted and labels them with correct unit measurements

☐   Include two statements completely describing their understanding of coordinate geometry, area, and perimeter (in sentence form)

Area and Perimeter Through Coordinate Geometry Internet Field Trip
Assessment
Name_____

Part A. Geometry Grid Game:
www.shodor.org/interactivate/activities/coords2/index.html
Activity 1 Put whole numbers from -10 to 10 in X=_ and Y=_ windows and click the
"Plot" button. The house will appear at the point with X and Y coordinates you entered.
Can you predict where the house will be?
Write where you think the house will be (*example: "In the top right corner of the graph."*)
_____
_____

Activity 2 Make the house appear at a random point on the game field by clicking on
the "New Point" button. Determine X and Y coordinates of the house and have
computer check your answer.

My answer was ___,___. The computer <u>agreed</u>   or   <u>disagreed</u>. (*circle one)*

Activity 3 Find a point on the coordinate plane where you want the house to appear.
Determine coordinates of the point, click the "Plot" button and see if the house
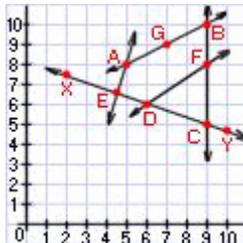appeared where you wanted it to be.   Write where you wanted it to
be:_____
Were your coordinates accurate? Yes   No

Part B.   Coordinate Geometry Matching Workout

http://www.math.com/school/subject3/practice/S3U1L2/S3U1L2Pract.html
Look at the graph and answer the questions on this sheet first. Then enter your
answers on the web page to see if they were correct. Circle the answers that you
missed. Write why you think you missed them in the space to the right of the questions.

**Match the descriptions
below with a point given in
the list on the right by
typing its letter in the box
provided.**

vertex of angle DCF   a. (7,9)

FCAT format adapted form Harcourt Brace & Company: Area and Perimeter Through
Coordinate Geometry Internet Field Trip by Joseph M. Furner and Andrea Jacobsen,
Florida Atlantic University and St. Lucie County, Florida, Beacon Lesson Plan # 8286.

endpoint of ray DF	☐	b. (9,5)
upper endpoint of segment BF	☐	c. (6,6)
vertex of angle AGB	☐	d. (5,8)
vertex of angle BAE	☐	e. (9,10)
endpoint of ray FC	☐	f. (9,8)

Part C. *Exploring Area and Perimeter:*

http://www.mathgoodies.com/lessons/vol1/area_rectangle.html

Write the multiplication problem that you had to solve and your answer for each of the area problems on this site below. Then have the computer check your answers.

1. ___x___=___   3. ___x___=___   5. ___x___=___

2. ___x___=___   4. ___x___=___

http://www.mathgoodies.com/lessons/vol1/perimeter.html

Write the formula or math problem that goes with each perimeter problem.
1.___+___+___+___=___

2.___+___+___=___

3.___+___+___+___+___+___=___ or ___x___=___

4.___+___+___+___=___ or ___/___=___

5.___/___=___ or ___+___+___+___+___=___

Part D. Personalizing Knowledge by Doing a Coordinate Graph to Explore Area and Perimeter:

Make a coordinate graph that reflects the dimensions of either your bedroom or classroom. Be sure to:
- ☐ Title the graph
- ☐ Choose an appropriate scale
- ☐ Label each axes of your graph
- ☐ Plots and labels ordered pair values at vertexes and certain locations
- ☐ To you best ability with known measurements accurately place/label ordered pairs and calculate the area of the room and label items in your bedroom or classroom with ordered pair values representing the locations of such items
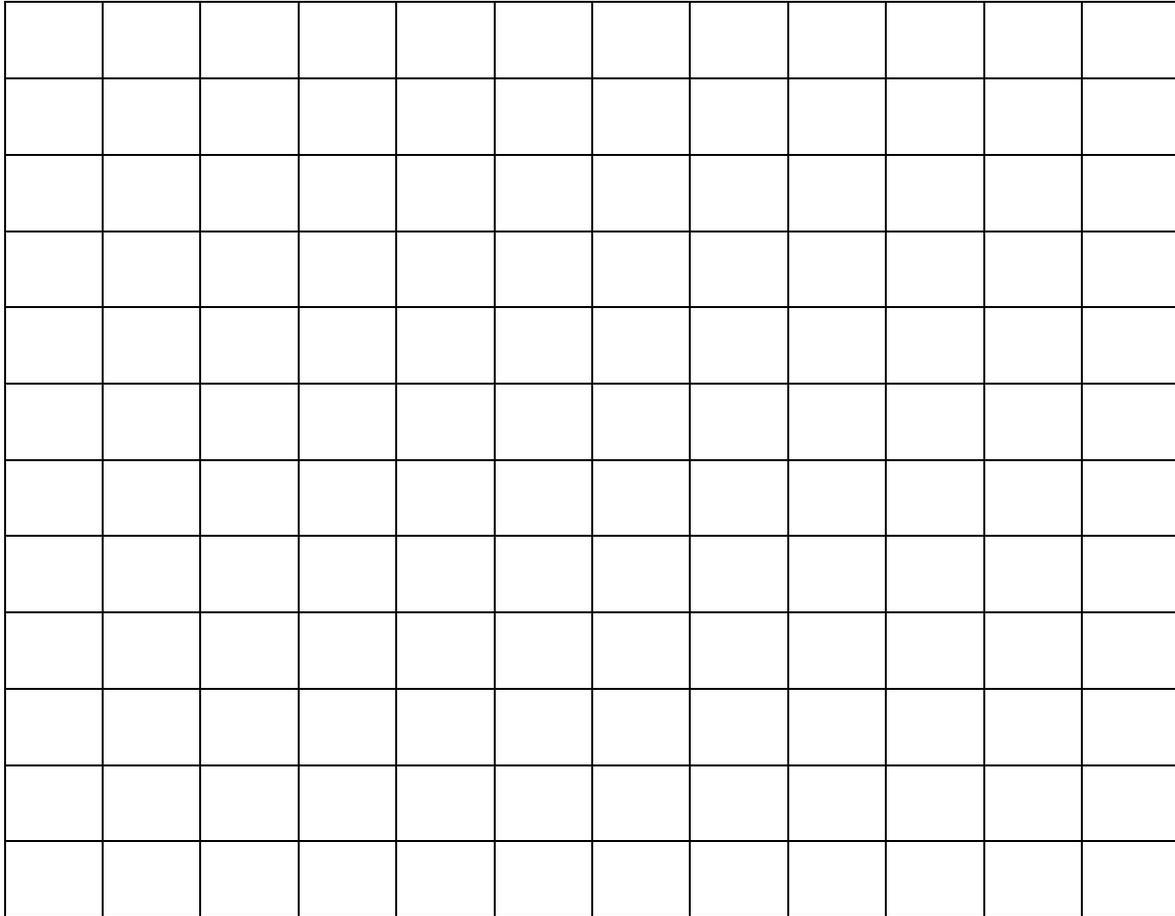
Use the graph to write two statements that state the ordered pair coordinates of your bedroom or classroom and then calculate the area and perimeter of the location with correct measurement units labeled. Be descriptive in how you arrived at each conclusion.

1) _____

_____

2) _____

_____

Area and Perimeter Through Coordinate Geometry Internet Field Trip
Answer Key for the Assessment

Part A. Geometry Grid Game:
Activity 1 Put whole numbers from -10 to 10 in X=_ and Y=_ windows and click the
"Plot" button. The house will appear at the point with X and Y coordinates you entered.
Can you predict where the house will be? (Students can plot different ordered to place
the house in various locations.)
Write where you think the house will be (*example: "In the top right corner of the graph."*)
_____
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_____

Activity 2 Make the house appear at a random point on the game field by clicking on the "New Point" button. Determine X and Y coordinates of the house and have computer check your answer. (Answers will vary)

My answer was ___,___. The computer <u>agreed</u>   or   <u>disagreed</u>. (*circle one)*

Activity 3 Find a point on the coordinate plane where you want the house to appear. Determine coordinates of the point, click the "Plot" button and see if the house appeared where you wanted it to be.   Write where you wanted it to be:_____
Were your coordinates accurate? Yes   No (Answers will vary)

Part B.   Coordinate Geometry Matching Workout

http://www.math.com/school/subject3/practice/S3U1L2/S3U1L2Pract.html
Look at the graph and answer the questions on this sheet first. Then enter your answers on the web page to see if they were correct. Circle the answers that you missed. Write why you think you missed them in the space to the right of the questions.
1. b
2. c
3. e
4. a
5. d
6. f
(Answers may vary to question as to why they missed any question)

Part C. Exploring Area and Perimeter:

 http://www.mathgoodies.com/lessons/vol1/area_rectangle.html
and
http://www.mathgoodies.com/lessons/vol1/perimeter.html
Write the multiplication/formula that you had to solve and your answer for each of the area/perimter problems on this site below. Then have the computer check your answers.

<u>Area</u>
1. 6x6=36   3. 5x5=25   5. 5x9=34

2. 12x4=48   4. 7x4=28

<u>Perimeter</u>
1.   12+12+4+4=32
2. 14+14+14=42
3. 8+8+8+8+8+8=48 or 8x6=48

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4. 4x5=20 or 20/4=5
5. 100/5=20 or 20+20+20+20+20=100

Part D. Personalizing Knowledge by Doing a Coordinate Graph to Exploring Area and Perimeter of Your Bedroom or Classroom:

- Students chose a reasonable title. (Ex: "Coordinate Grid of My Bedroom or Classroom".)
- Students chose an appropriate scale. (Ex. Each equals one or two feet or one yard.)
- Students labeled the axes with x and y. (X-axis and Y-axis labeled)
- Students accurately graphed the dimensions of their bedroom or classroom and label the ordered pair values at vertexes.
- Students accurately calculate the area and perimeter of their rectangular location
- Students write two statements concluding their dimensions with ordered pairs of their location graphed and the area and perimeter of the location