THE WILLIAMSBURG HIGH SCHOOL FOR ARCHITECTURE AND DESIGN

Dear Student,

Congratulations on Passing the Integrated Algebra Regents. In September you will be enrolled in Geometry. Geometry is the study of lines, angles, and shapes and their properties. Emphasis will be placed on making connections, drawing conclusions, and using logical reasoning to construction viable formal and informal arguments.

It is important that you continue to develop your mathematical skills over the summer. Please watch the online Pearson videos and take notes for Chapter 1 (Tools of Geometry) and Chapter 2 (Reasoning and Proof). You can find the videos at the following link.
http://www.jmap.org/JMAP_GEOMETRY_PEARSON_RESOURCES.htm

After watching the videos, answer the questions below in complete sentences. Your answers should be typed (single spaced) or neatly handwritten. This assignment is due on September 9th (the first day of school). This assignment will be graded and count toward your first marking period grade.

Answer the following questions:

1) Create a glossary of definitions for the following terms:

   a. Point
   b. Line
   c. Plane
   d. Line Segment
   e. Ray
   f. Parallel Lines
   g. Perpendicular Lines
   h. Complementary Angles
   i. Supplementary Angles
   j. Vertical Angles
   k. Conditional Statement
   l. Inverse Statement
   m. Converse Statement
   n. Biconditional Statement

2) A section of the United States west of the Mississippi river is called the Great Plains. Explain why this area may be called a plane but how it is unlike the mathematical plane.

3) If an obtuse angle is bisected, what kind of an angle is each of the two angles formed? Explain your reasoning.

4) Explain the difference between inductive and deductive reasoning.

5) What makes a good definition? Why are good definitions are important? Explain why "A hammer is a tool" is not a good definition.

6) Samuel said that if you know that a conditional is true then you know that the converse of the conditional is true. Do you agree with Samuel? Explain why or why not.

7) Write a proof that demonstrates the validity of the theorem: "Vertical angles are congruent."