Due: 1/31/17 at 5:00PM

Instructions: Your answers to the following questions do not need to be lengthy or written in complete sentences, but should reflect preparation for our discussion about Chapter 1 at the beginning of class.

Questions:

1. What is the difference between postulates and theorems?

   Postulates (or axioms) are statements that we accept as true and do not try to prove. Theorems are statements that we prove using logic, undefined terms, definitions, postulates, and other previously proved theorems.

2. How can you mark a figure to indicate that two or more segments have the same length?

   Indicate the lengths of the segments or mark the segments with matching numbers of tick marks.

3. Why do we need to have undefined terms in geometry?

   We can't define every term because every definition depends on previously defined terms, and we wouldn't have any of those to use to define the simplest terms.

4. Do two distinct planes always intersect in a line?

   If two distinct planes intersect, they will intersect in exactly one line. However, some pairs of planes do not intersect at all, such as the top and bottom of a box.

5. Why is it necessary to use absolute value to calculate the distance between two points on a number line from their coordinates?

   If absolute value were not used, the answer might be a negative number. Distance can never be negative. For any two distinct points, the distance between them will always be positive.

6. Can two angles be both supplementary and congruent? If so, what are their measures?

   Yes; The measure of each angle is 90°.

7. Can a pair of vertical angles be both complementary and congruent? If so, what are their measures?

   Yes; The measure of each angle is 45°.

8. Why don't we need to use absolute value when calculating the distance between two points in the coordinate plane?

   In the Distance Formula, you square the differences between the x-coordinates and the y-coordinates of the two points. If the differences are negative, their squares will be positive.

9. What are the two tools allowed for basic geometry constructions? How is each of them used?

   The two tools are a compass and a straight edge (unmarked ruler). The compass is used to draw circles and arcs and to copy distances. The straight edge is used to draw lines through pairs of points.

10. Why isn't a regular marked ruler allowed when doing basic constructions?

    The idea of a construction is to copy or create a figure without measuring. Using a regular ruler would allow you to measure lengths.

Discussion Questions for Chapter 1

Muddiest Point:

What questions do you have about the notes you took in Chapter 1, or about the class in general?

MML Homework Questions:

Are there any MML homework problems from Chapter 1 that you would like to discuss, or any questions you have about the homework in general?