Assignment (See the **October 5** version of the theorems)

1. Prove Theorem 4 (Triangle Inequality).

2. Rewrite a proof of theorem 5, using theorem 4.

3. Give an example of a function from the plane to the plane that is 1-1 and an example of a function that is not 1-1.

4. Give an example of a function from the plane to the plane that is not onto.

5. Prove theorem 7

6. Prove theorem 8

7. Explain how to get an isometry that maps  to  for each of the triangle pairs below (you will be describing 4 isometries).

a. b.

 

c. d.

 