Geometry Test 2, what to study:

Proving that distance-defined shapes are preserved under an isometry.

(like theorem 1)

Proving results about ordered points. For example:

- Theorem 2 (if 4 sets have an order then they also have the opposite order
- Prove 4 ordered points are collinear (theorem 3)
- Prove that if $A-B-C-D$ then $C \in \overline{BD}$, using results up to and including thm. 4.

Prove theorems about lines (theorems 3-10) or parts of those theorems.

Note, one part of theorem 5 might be asked for without the others, For example:

- Prove that if $K-L-M-N$ then, $d(K,L)+d(L,N)=d(K,N)$, $d(K,M)+d(M,N)=d(K,N)$, and $d(K,L)+d(L,M)=d(K,M)$ (using up to and including thm 4)
- Prove that if $d(K,L)+d(L,N)=d(K,N)$, $d(K,M)+d(M,N)=d(K,N)$, $d(L,M)+d(M,N)=d(L,N)$ and $d(K,L)+d(L,M)=d(K,M)$ then each of K,L,M,N lie on each line defined by any other two of the four points. (using up to and including thm 4)

And only one point of theorem 4 might be asked for without the others, for example:

- Prove that if $d(A,B)+d(B,C)=d(A,C)$, then $C \in \overleftrightarrow{AB}$

You might also be asked to prove this result (probably it should have been theorem 1.5 or something):

- $\overline{AB}=\overline{BA}$

I am planning to put 3-4 problems on this test, all of which will be some form of "prove that…"

1. A problem of the form: prove that the isometric image of a ____ is a _____
2. A problem that asks to prove a part of theorem 5
3. A problem that asks for the proof of one of theorems 6, 7, 8 or 9
4. ??? (I am undecided right now)
5.