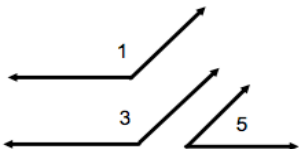Reminder: Quiz tomorrow on proof, special kinds of angles, and the theorems of chapter 2

1. **New Theorems**. Read Theorems 2-7 and 2-8 on page 61 in the accent of your choice. Then, as a group, orally do problems p.62: C1,5,6.

2. Proof of Theorem 2-7 for the case where two angles are supplements of the same angle.
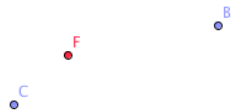
Given:
∠1 and ∠5 are supplementary;
∠3 and ∠5 are supplementary.

Prove: ∠1 ≅ ∠3

Statement	Reason
1.	1. Given
2. $m\angle 1 + m\angle 5 = 180°$; $m\angle 3 + m\angle 5 = 180°$.	2.
3.	3. Substitution POE
4.	4. Reflexive POE
5. $m\angle 1 = m\angle 3$, or ∠1 ≅ ∠3	5.

3. **Locus**. Recall that a *parabola* is the locus of points equidistant from a point and a line.

a. Add pertinent symbols to the diagram to indicate that points B and C are in the locus of points equidistant from point F and line *d*.

b. Find 2 more points in the locus, plot and label them.

4. **Planning a Proof**   Hopefully you have begun to notice the general structure of a proof:
• The "Given"
• A diagram that illustrates given information
• The statement of what is to be proved
• A series of statements and reasons that lead sequentially from what is given to what is to be proved.

5. Write the proof stated below. Use the template shown.
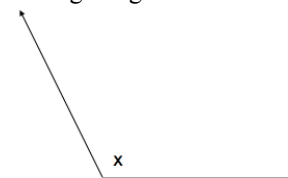*Given*: $\overline{AC} \perp \overline{BC}$; ∠3 is comp. to ∠1

Prove: ∠3 ≅ ∠2
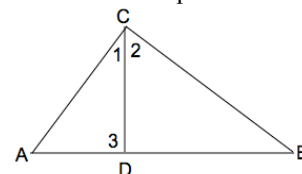
Statement	Reason
1.	1. Given
2.	2.
3.	3.
4.	4.
5.	5.

6. Go back to the pink sheet, **Construction 1**, and write out the steps for constructions 1 and 2. Label points, so that your instructions refer to your diagram. Use the math open reference website or the text, pages 375-380, as a resource.

7. **Constructions**. Given angles *x* and *y*. Construct angles having the given measures:

a. *x+y*   b. 180-2*y*