

**GEOMETRY
HONORS
CLASS NOTES**

Name: _____

Section: 2.5 Period: _____ Date: _____

Key Question: _____

Questions/ Main
Ideas:

Warm-up: True or False

- The sum of the measures of the angles that form a linear pair is 90° .
- A conjecture is a statement that you think is true but may or may not be true.

Notes:

Activity 1 (page 117-118 in textbook)

Draw a pair of intersecting lines in the space below. Label the 4 angles created 1, 3, 2, & 4 in clockwise order.

Answer the following...

- What is the relationship between $\angle 3$ and $\angle 1$ and between $\angle 3$ and $\angle 2$? _____
- $m\angle 1 + m\angle 3 =$ _____
- $m\angle 2 + m\angle 3 =$ _____
- What property of equality leads to the following?
 $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 3$ _____
- What property of equality leads to the following?
 $m\angle 1 = m\angle 2$ _____

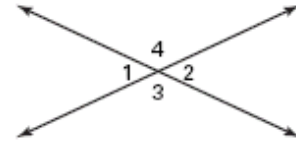
- _____ **reasoning** is the process of forming conjectures that are based on observations.
- Steps a-c above are an example of inductive reasoning.
- In steps d-e above, you used _____ reasoning to complete an informal proof.

Two-Column Proof

Given: $\angle 1$ and $\angle 2$ are vertical angles.

Prove: $\angle 1 \cong \angle 2$

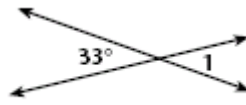
Proof:



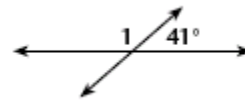
Statements	Reasons
1. $\angle 1$ and $\angle 2$ are vertical angles.	
2. $m\angle 1 + m\angle 3 = 180^\circ$ $m\angle 2 + m\angle 3 = 180^\circ$	
3. $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 3$	
4. $m\angle 1 = m\angle 2$ ($\angle 1 \cong \angle 2$)	

Example 1

Find the measure of $\angle 1$.

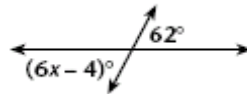


a.

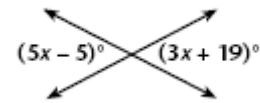


b.

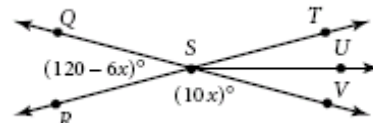
Example 2



a.



b.



c.

Summary: _____
