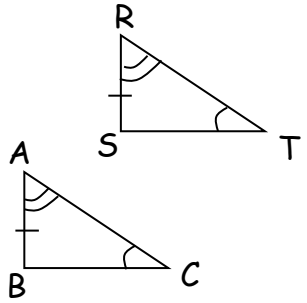
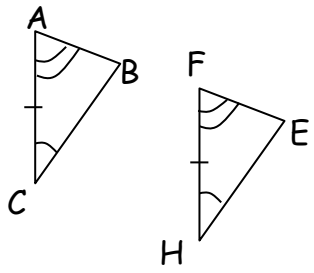
7.3-7.7 ELABORATE WS - Congruent Triangles Name_____
PAP Geometry Date_____

*A congruence statement is a statement using letter order to show corresponding parts.

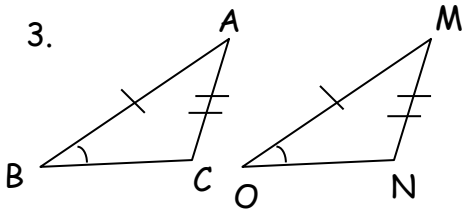
Determine if the triangles are congruent. If yes, write the triangle congruence statement (letter order start with $\Delta ABC \cong \Delta$_____ ) and name the postulate used (SSS, SAS, ASA, AAS, or HL).

1. 


$\Delta ABC \cong \Delta$_____
by _____

2. 


$\Delta ABC \cong \Delta$_____
by _____

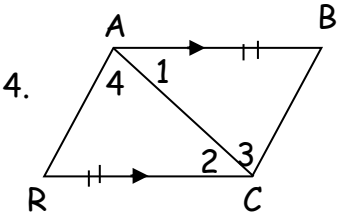
3. 


$\Delta ABC \cong \Delta$_____
by _____

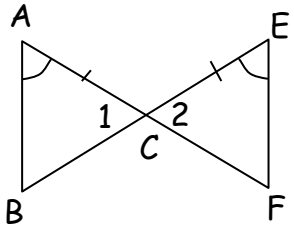
**You may add to the picture:**

1) shared side using REFLEXIVE PROPERTY
2) 2 $\angle s$ = using VERTICAL ANGLES =
3) 2 $\angle s$ = using $||\rightarrow$ AI$\angle s$ =
4) 2 $\angle s$ = using $||\rightarrow$ Corr. $\angle s$ =

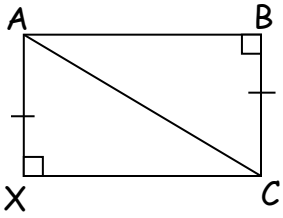
List any information that is added and justify.

4. 


Add: _____
Add: _____
$\Delta ABC \cong \Delta$_____
by _____

5. 

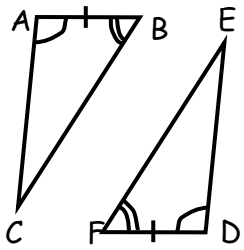

Add: _____
$\Delta ABC \cong \Delta$_____
by _____

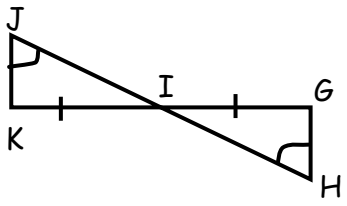
6. 

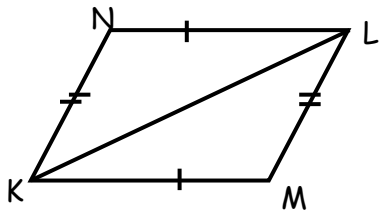

Add: _____
$\Delta ABC \cong \Delta$ _____
by _____

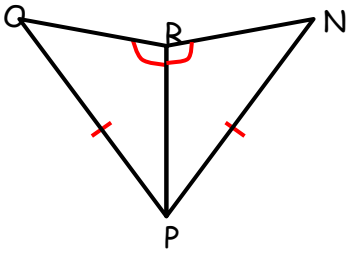
**PRACTICE:**

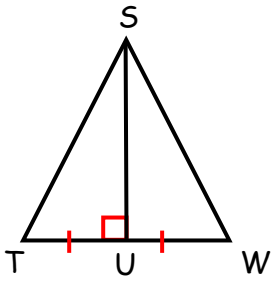
**Tell whether the SSS, ASA, AAS, SAS or HL postulates can be applied to prove the triangles congruent. Write a congruence statement. Don't forget what you may assume from a diagram. If the triangles cannot be proved congruent, write not possible and do not include a congruence statement.**

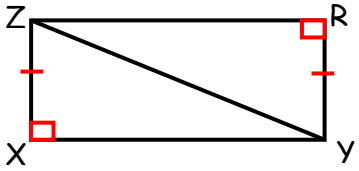
1. 


2. 

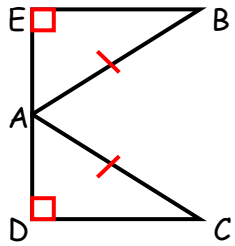

3. 


4. 


5. 


6. 


**What additional information would you need to prove the triangles congruent by HL?**

7. 

$\overline{IK}$.

8. In $\Delta FGH$ and $\Delta IJK$, $\overline{FG} \cong \overline{IJ}$ and $\overline{FH} \cong$