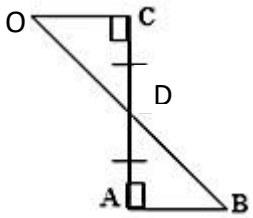
11C SSS, SAS, ASA and AAS

Name: _____ Per: _____

SHOW YOUR WORK AND WORK IN PENCIL

For each pair of triangles, tell which theorem **(SSS, SAS, ASA or AAS), <u>if any</u>, makes the triangles congruent.** Complete the triangle statement, if congruent. If the triangles are NOT congruent, **explain** why.

1.

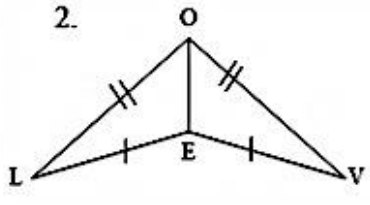


Congruent: YES / NO

Theorem:_____

ΔDCO ≅ Δ_____

2.

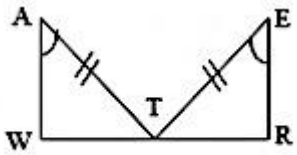


Congruent: YES / NO

Theorem:_____

ΔVOE ≅ Δ_____

3.

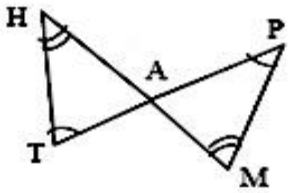


Congruent: YES / NO

Theorem:_____

ΔTAW ≅ Δ_____

4.

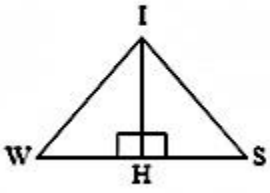


Congruent: YES / NO

Theorem:_____

ΔHAT ≅ Δ_____

5. Given: $\overrightarrow{IH}$ Bisects ∠WIS

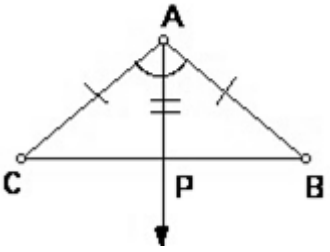


Congruent: YES / NO

Theorem:_____

ΔHIS ≅ Δ_____

6.

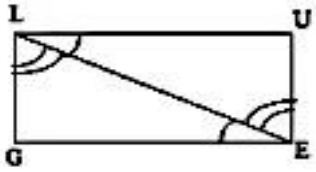


Congruent: YES / NO

Theorem:_____

ΔCAP ≅ Δ_____

7.

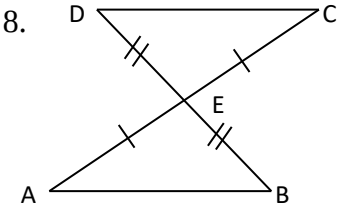


Congruent: YES / NO

Theorem:_____

ΔGLE ≅ Δ_____

8.

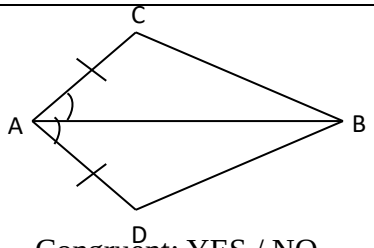


Congruent: YES / NO

Theorem:_____

ΔABE ≅ Δ_____

9.



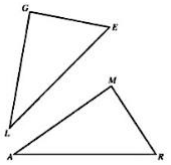
Congruent: YES / NO

Theorem:_____

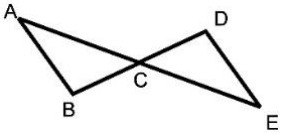
Δ ADB ≅ Δ_____

10. **Mark** the specified parts to show the pair of triangles are congruent by the given theorem.

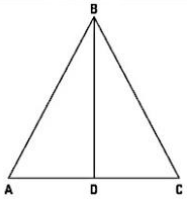
a. Angle-Side-Angle (ASA)



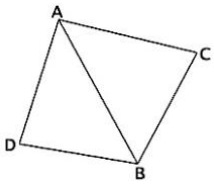
b. Angle-Angle-Side (AAS)



c. Side-Side-Side (SSS)

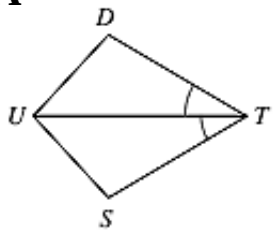


d. Side-Angle-Side (SAS)

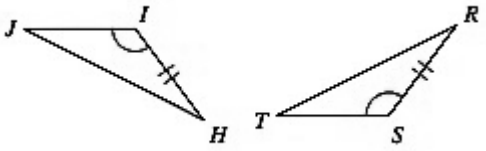


11. Mark on the **<u>triangles</u> ONE additional set of side/angle needed to prove congruence** for the theorem given. (Don't forget reflexive properties and vertical angles-don't need to be marked.)

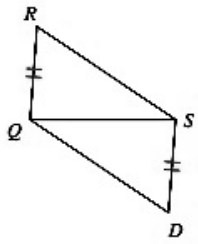
a. **ASA**



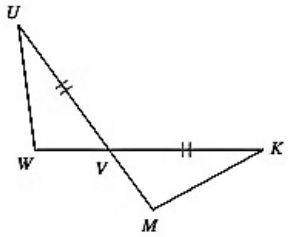
b. **SAS**



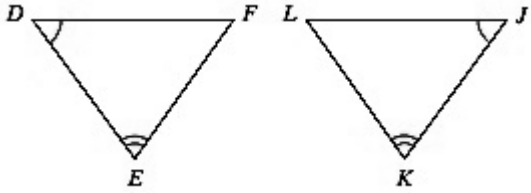
c. **SSS**



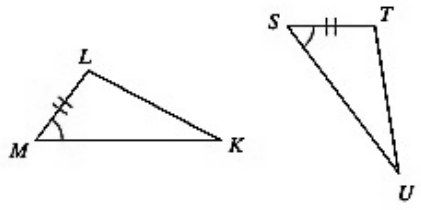
d. **SAS**



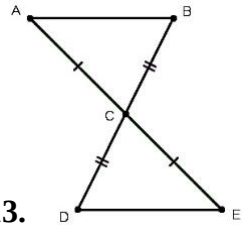
e. **ASA**



f. **AAS**



12. Fill in the blanks for the following proof.



Given : $\overline{AC} \cong \overline{EC}$

$\overline{BC} \cong \overline{DC}$

Prove : $\triangle ABC \cong \triangle EDC$

Statement (I know)	**Reason (Because)**
$\overline{AC} \cong \overline{EC}$	
	Given
∠ACB ≅ ∠_____	
Δ_____ ≅ ΔEDC	By _____ Theorem

13.

13. Calculate the perimeter of each polygon **exactly and then estimate it to the nearest tenth**. SYW**.**

a.

$QS =$ _____

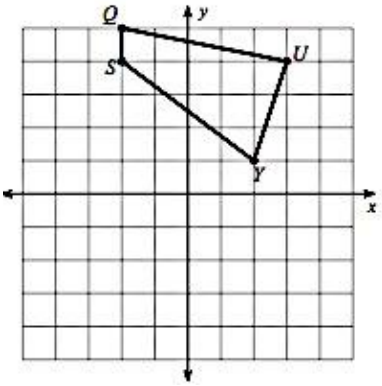
$SY =$ _____

$QU =$ _____

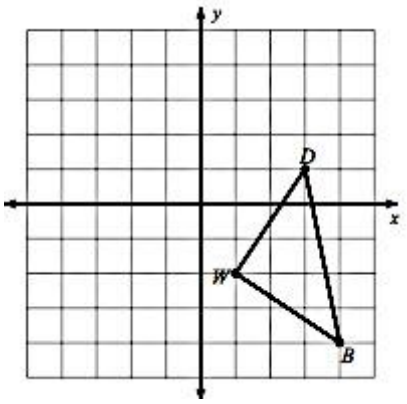
$UY =$ _____

TOTAL: _____

and _____



b.



Extra Credit: Find the area of each polygon above.

14. Use the following table:

a. Find the line of regression_____

b. What is the correlation coefficient? _____

X	1	3	10	16	26	36
Y	42	50	75	100	150	200