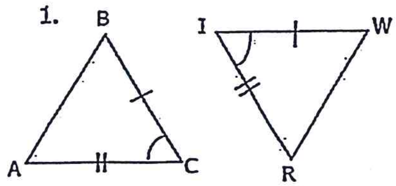
Unit 5: Triangle Congruence

Proving Triangles Congruent: ASA, AAS, SAS, SSS

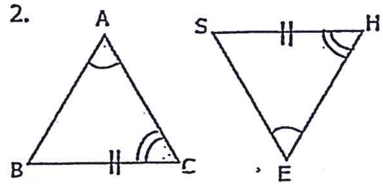
Name____________________

Per. _______

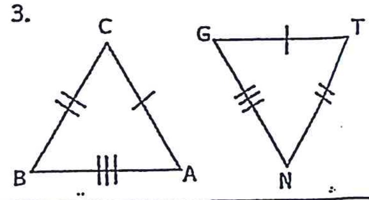
For each problem give the correct naming order of the congruent triangles. Write that name in order on the lines for the problem number (see box at bottom). Also, indicate which postulate or theorem is being used.

1. 

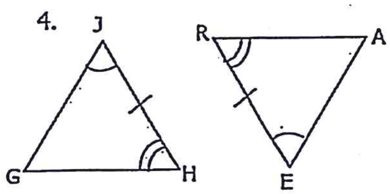
ΔABC ≅ Δ______ by ______

2. 

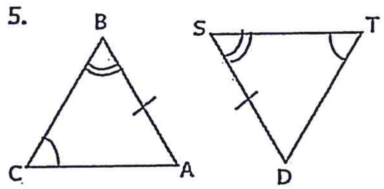
ΔABC ≅ Δ______ by ______

3. 

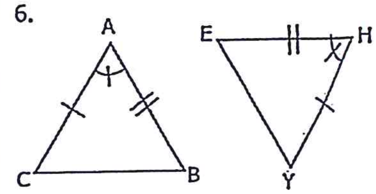
ΔABC ≅ Δ______ by ______

4. 

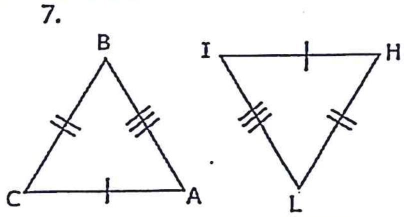
ΔGHJ ≅ Δ______ by ______

5. 

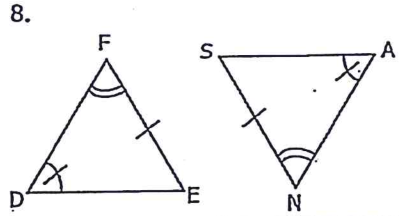
ΔABC ≅ Δ______ by ______

6. 

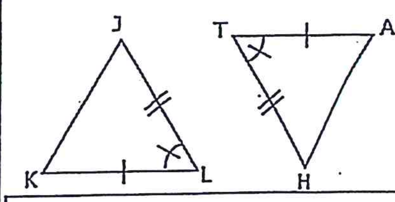
ΔABC ≅ Δ______ by ______

7. 

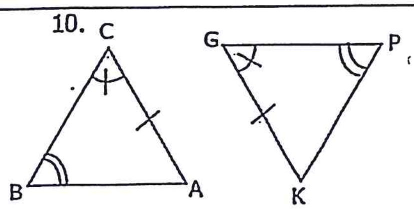
ΔABC ≅ Δ______ by ______

8. 

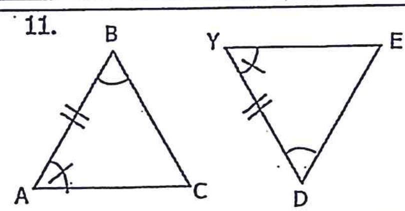
ΔDEF ≅ Δ______ by ______

9. 

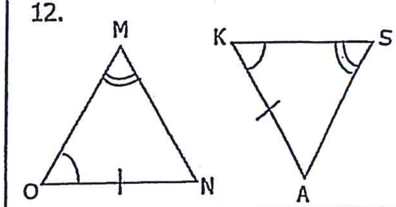
ΔJKL ≅ Δ______ by ______

10. 

ΔABC ≅ Δ______ by ______

11. 

ΔABC ≅ Δ______ by ______

12. 

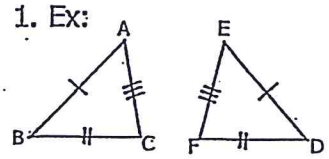
ΔMNO ≅ Δ______ by ______

_	_	_	_	_	O	_	_	N	_	_	_	S	_	_	E	_	I	_	_	_	_	_	T	_								
4	4	4	8	8		8	12		12	12	2		2	2		5		5	5	9	9	9		6								
_	_	_	E	_	E	_	_	_	O	_	_	N	_	U	_	_	_	_	T	_	E	_	_	I	_							
6	6	10				10	10	1		1	1		3		3	3	7	7		7		11	11		11							

(When you are done with the puzzle, there are: 3 SAS, 5 AAS, 2 ASA, and 2 SSS instances.)

For each figure, which triangles are congruent? Write the "proof parts" accurately that would lead to showing the congruence and give the correct reason why the triangles are congruent.

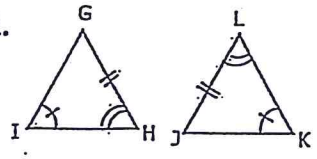
1. Ex:



$\overline{AB} \cong \overline{ED}$
$\overline{AC} \cong \overline{EF}$
$\overline{BC} \cong \overline{DF}$
$\rightarrow \Delta ABC \cong \Delta EDF$

(reason: *SSS* Postulate)

2.

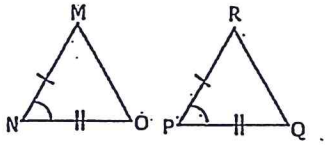


(reason:)

← congruent statement

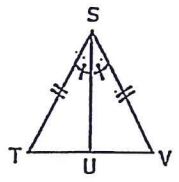
← Choose from SSS, SAS, ASA Post. SAA Theorem

3.



(reason:)

4.

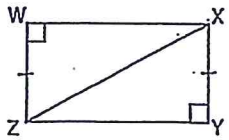


(reason:)

Is $\angle T \cong \angle V$?

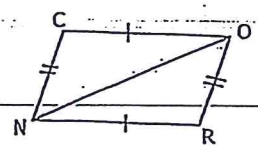
Why?

5.



(reason:)

6.



(reason:)

Is $\angle CON \cong \angle RON$?

Why or why not?