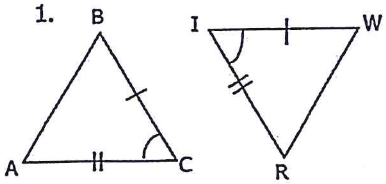
Unit 5: Triangle Congruence HW#4

Proving Triangles Congruent: ASA, AAS, SAS, SSS ~~AAA~~ ~~SSA~~

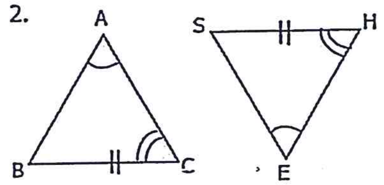
Name______________________

Per. ________

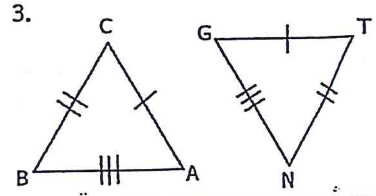
For each problem give the correct naming order of the congruent triangles. Write that name in order on the lines for the problem number (see box at bottom). Also, indicate which postulate or theorem is being used.

1.


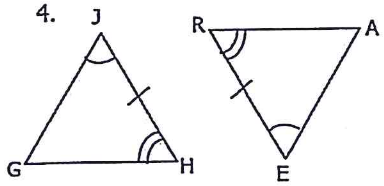
ΔABC ≅ Δ RWI by SAS

2.


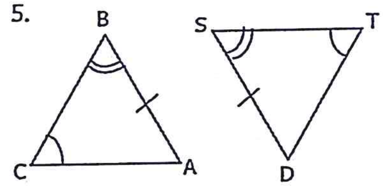
ΔABC ≅ Δ ________ by ________

3.


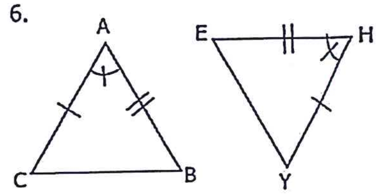
ΔABC ≅ Δ ________ by ________

4.


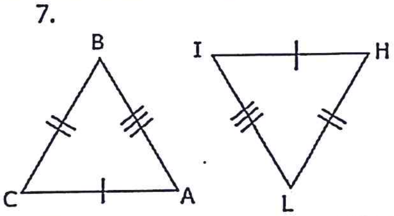
ΔGHJ ≅ Δ ________ by ________

5.


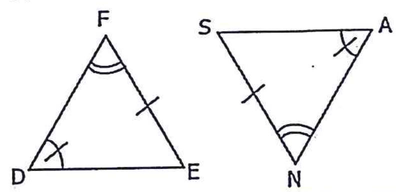
ΔABC ≅ Δ ________ by ________

6.


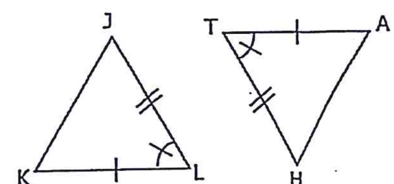
ΔABC ≅ Δ ________ by ________

7.


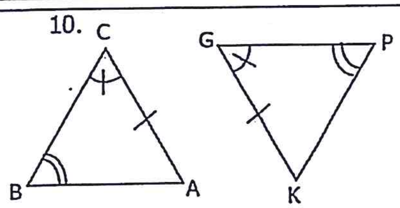
ΔABC ≅ Δ ________ by ________

8.


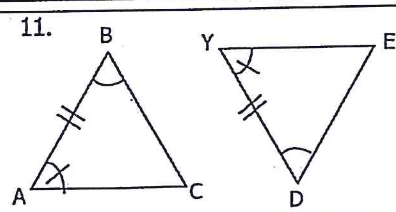
ΔDEF ≅ Δ ________ by ________

9.


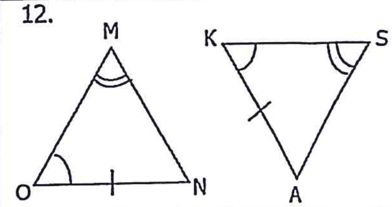
ΔJKL ≅ Δ ________ by ________

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

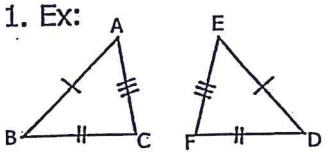
_ _ _ E E _ _ _ O _ _ N _ U _ _ _ _ T _ E _ _ I _.

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.

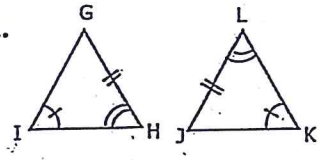
1. Ex:



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

(reason: *SSS* Postulate)

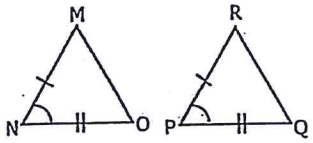
2.



$\angle I \cong \angle K$
$\angle H \cong \angle L$
$\overline{GH} \cong \overline{JL}$
→ $\Delta IGH \cong \Delta KJL$ ← congruence statement

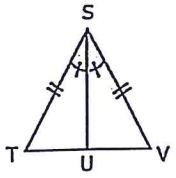
(reason: SAA) ← Choose from SSS, SAS, ASA Post. SAA Theorem

3.



(reason:)

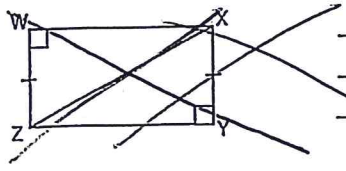
4.



$\overline{VS} \cong \overline{VS}$

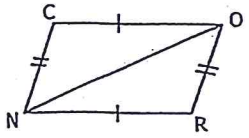
(reason:)

5.



(reason:)

6.



(reason:)