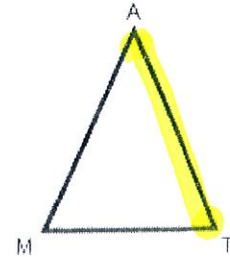
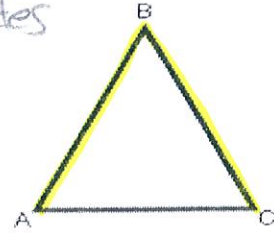


Included Angle the angle between the 2 adjacent sides

Name the angle included between \overline{AB} and \overline{BC} $\angle B$

\overline{BC} and \overline{AC} $\angle C$ \overline{AC} and \overline{AB} $\angle A$



\overline{AT}

\overline{MA}

\overline{MT} or \overline{MA}

Included Side the side between 2 angles

1. In $\triangle MAT$, which side is included between $\angle A$ and $\angle T$?

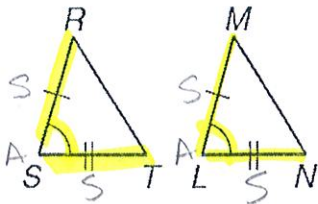
2. In $\triangle MAT$, which side is included between $\angle M$ and $\angle A$?

3. Which side is not included between angles A and T?

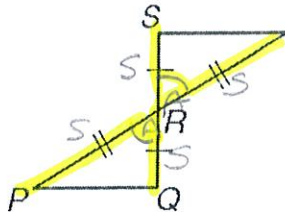
The third, fourth, and fifth congruence theorem:

Side-Angle-Side (SAS)

$\triangle SRT \cong \triangle LMN$



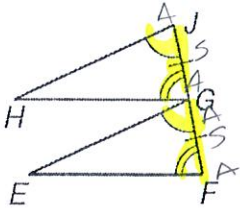
$\triangle SRT \cong \triangle QRP$



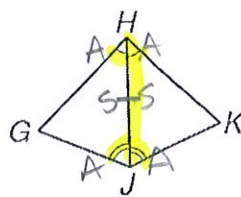
If two sides and the **included angle** of one triangle are congruent to two sides and the **included angle** of a second triangle, then the two triangles are congruent.

Angle-Side-Angle (ASA)

$\triangle GHJ \cong \triangle FEG$



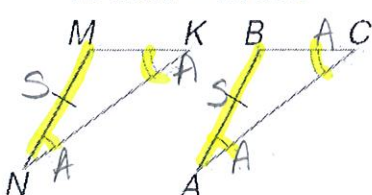
$\triangle GHJ \cong \triangle KHJ$



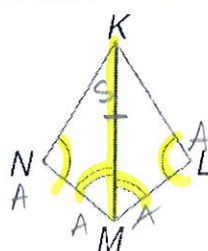
If two angles and the **included side** of one triangle are congruent to two angles and the **included side** of a second triangle, then the two triangles are congruent.

Angle-Angle-Side (AAS)

$\triangle NMK \cong \triangle ABC$



$\triangle NMK \cong \triangle LMK$

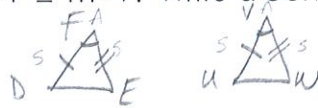


If two angles and a **nonincluded side** of one triangle are congruent to two angles and the **nonincluded side** of a second triangle, then the two triangles are congruent.

The Only Ways To Prove Triangles are Congruent: SSS SAS ASA AAS HL

1. In two triangles, $DF \cong UV$, $FE \cong VW$ and $m\angle F \cong m\angle V$. Write a congruence statement.

$\triangle DFE \cong \triangle UVW$ by SAS



2. If $\angle EDF \cong \angle LNP$, $DE \cong NL$ and $\angle E \cong \angle L$. Write the congruence statement. $\triangle EDF \cong \triangle LNP$ by ASA

Determine whether the triangles are congruent.

If they are, write a congruence statement explaining why they are congruent.

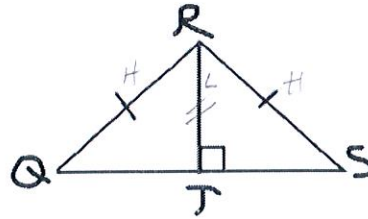


3.



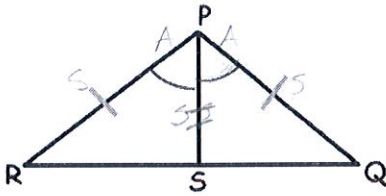
$\triangle PLM \cong \triangle NOM$ by ASA or AAS

4.



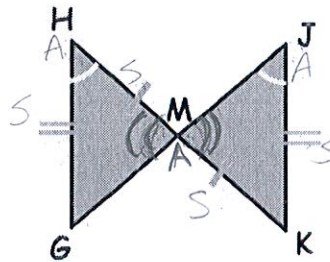
$\triangle QRT \cong \triangle SRT$ by HL

5.



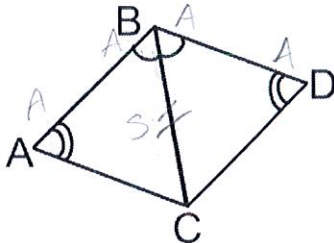
$\triangle RPS \cong \triangle QPS$ by SAS

6.



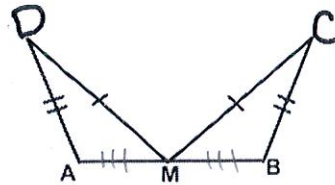
$\triangle HGM \cong \triangle KJM$ by AAS

7.



$\triangle ABC \cong \triangle DCB$ by AAS

8.



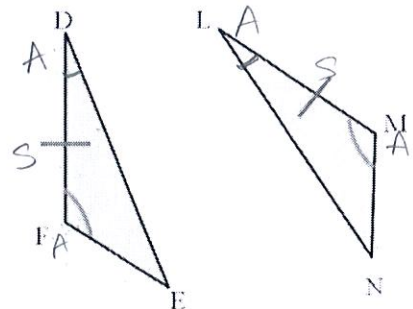
Given: M is the midpoint of \overline{AB} .

$\triangle ADM \cong \triangle BCM$ by SSS

9. Use the two triangles on the right to answer the following questions:

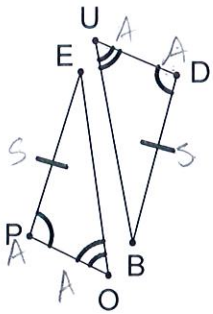
A. What other pair of angles needs to be marked so that the two triangles are congruent by ASA? $\angle D \cong \angle L$

B. What other pair of angles needs to be marked so that the two triangles are congruent by AAS? $\angle E \cong \angle N$

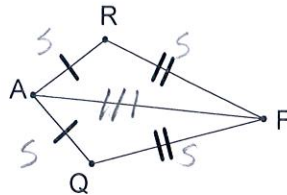


Homework- Practice with Triangle Congruence

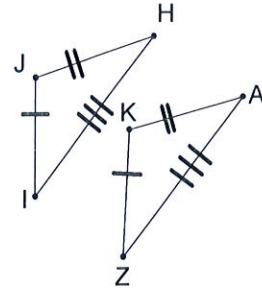
State whether each pair of triangles is congruent by SSS, SAS, ASA, AAS, or HL; if none of these methods work, write N. If congruent, make a congruence statement for the triangles. Use a separate sheet of paper if necessary.



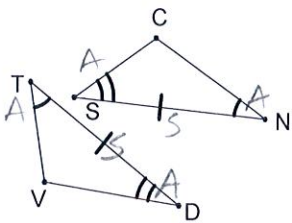
1. $\triangle POE \cong \triangle DUB$ by AAS



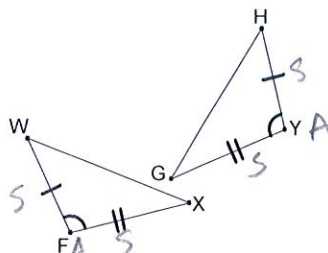
2. $\triangle ARF \cong \triangle AQF$ by SSS



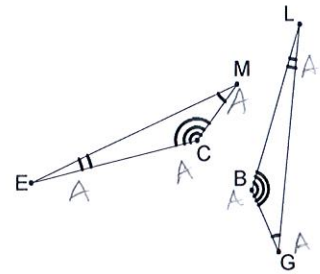
3. $\triangle IJH \cong \triangle ZKA$ by SSS



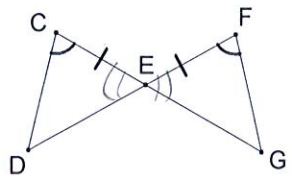
4. $\triangle VTD \cong \triangle CNS$ by ASA



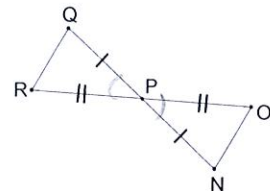
5. $\triangle WFX \cong \triangle HYG$ by SAS



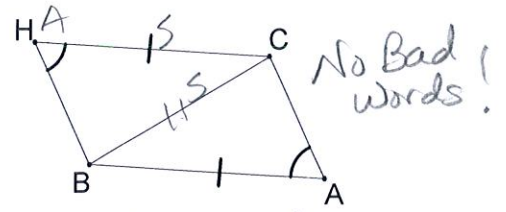
6. Not Congruent
 $\triangle ___ \cong \triangle ___$ by ___



7. $\triangle DCE \cong \triangle GPE$ by ASA

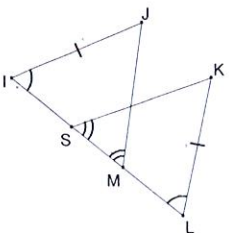


8. $\triangle QPR \cong \triangle NPO$ by SAS

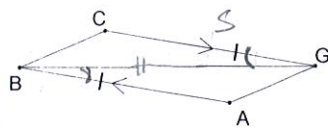


9. Not Congruent
 $\triangle ___ \cong \triangle ___$ by ___

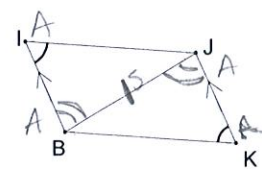
No Bad words!



10. $\triangle JIM \cong \triangle KLS$ by AAS



11. $\triangle CGB \cong \triangle ABG$ by SAS

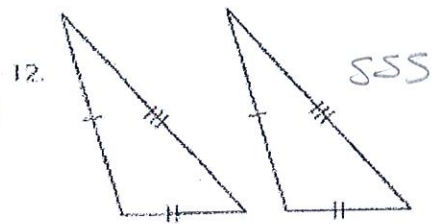
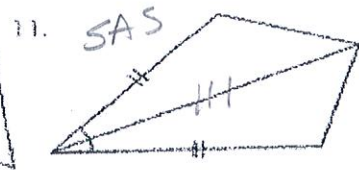
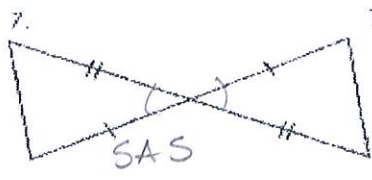
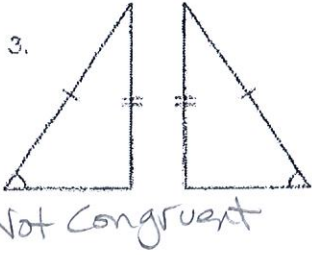
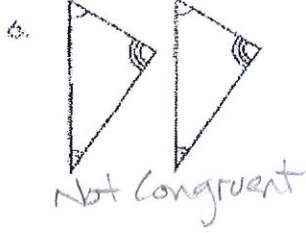
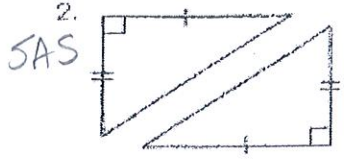
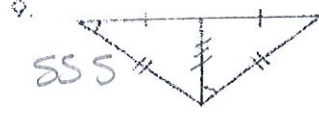
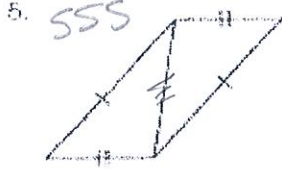
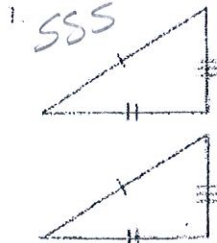


12. $\triangle IBJ \cong \triangle KJB$ by AAS

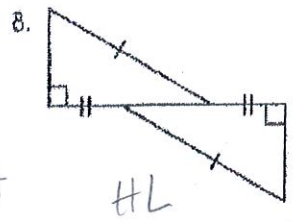
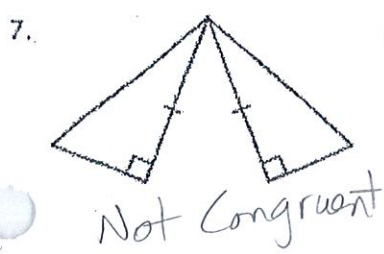
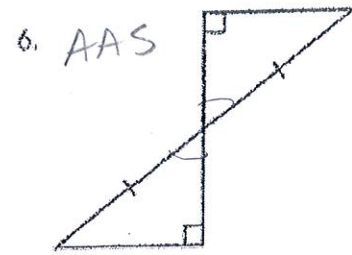
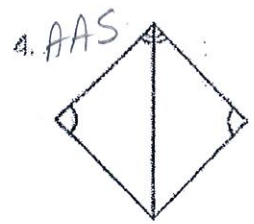
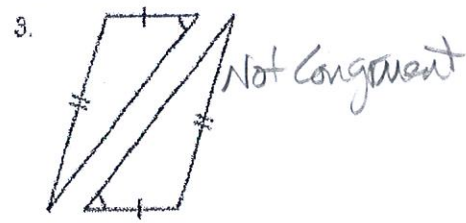
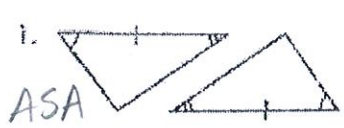
Congruent Triangles Worksheet #2

Name _____ Period _____

I. State whether these triangles are congruent by SSS, SAS, or none.



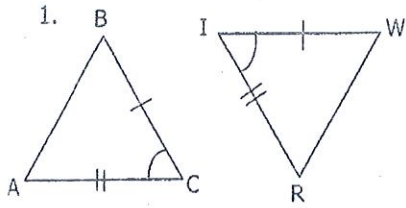
II. State whether these triangles are congruent by ASA, AAS, HL, or none.



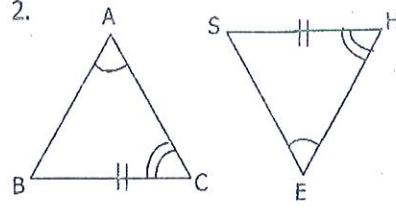
Geometry preAP
 Proving Triangles Congruent: ASA, AAS, SAS, SSS

name: Key
 date: _____

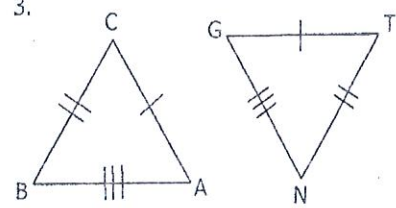
For each problem give the correct naming order of the congruent triangles. Write that name in order on the lines for the problem number (see box at bottom). Also, indicate which postulate or theorem is being used.



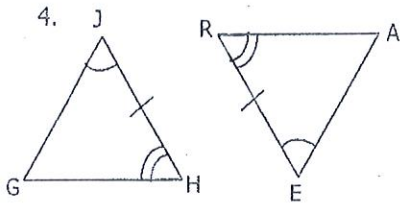
$\triangle ABC \cong \triangle RWI$ by SAS



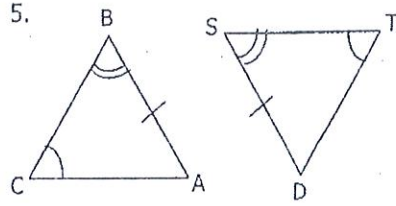
$\triangle ABC \cong \triangle ESH$ by AAS



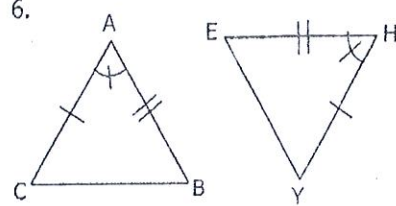
$\triangle ABC \cong \triangle GNT$ by SSS



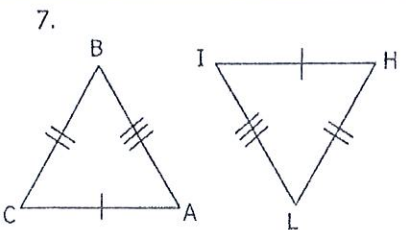
$\triangle GHJ \cong \triangle ARE$ by ASA



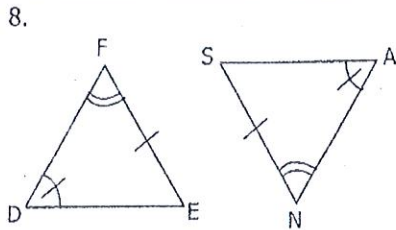
$\triangle ABC \cong \triangle DST$ by AAS



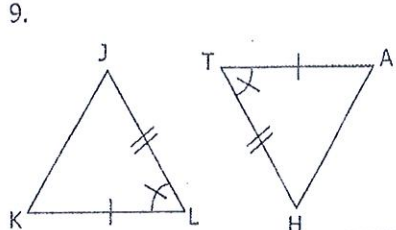
$\triangle ABC \cong \triangle HEY$ by SAS



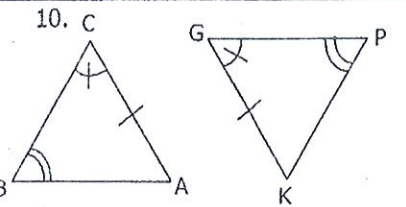
$\triangle ABC \cong \triangle ILH$ by SSS



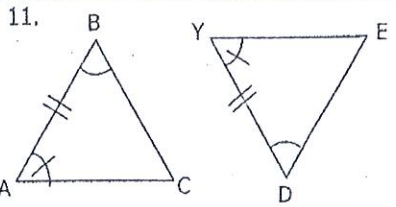
$\triangle DEF \cong \triangle ASN$ by AAS



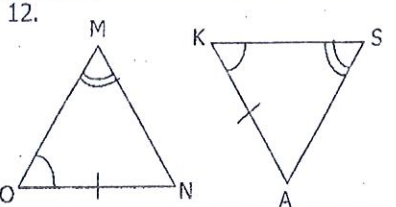
$\triangle JKL \cong \triangle HAT$ by SAS



$\triangle ABC \cong \triangle KPG$ by AAS



$\triangle ABC \cong \triangle YDE$ by ASA



$\triangle MNO \cong \triangle SAK$ by AAS

A R E A S O N S N A K E S S H E D I S T H A T T H
 4 4 4 8 8 8 12 12 12 2 2 2 5 5 5 9 9 9 6
E Y K E E P G R O W I N G U N T I L T H E Y D I E .
 6 6 10 10 10 1 1 1 3 3 3 7 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.)