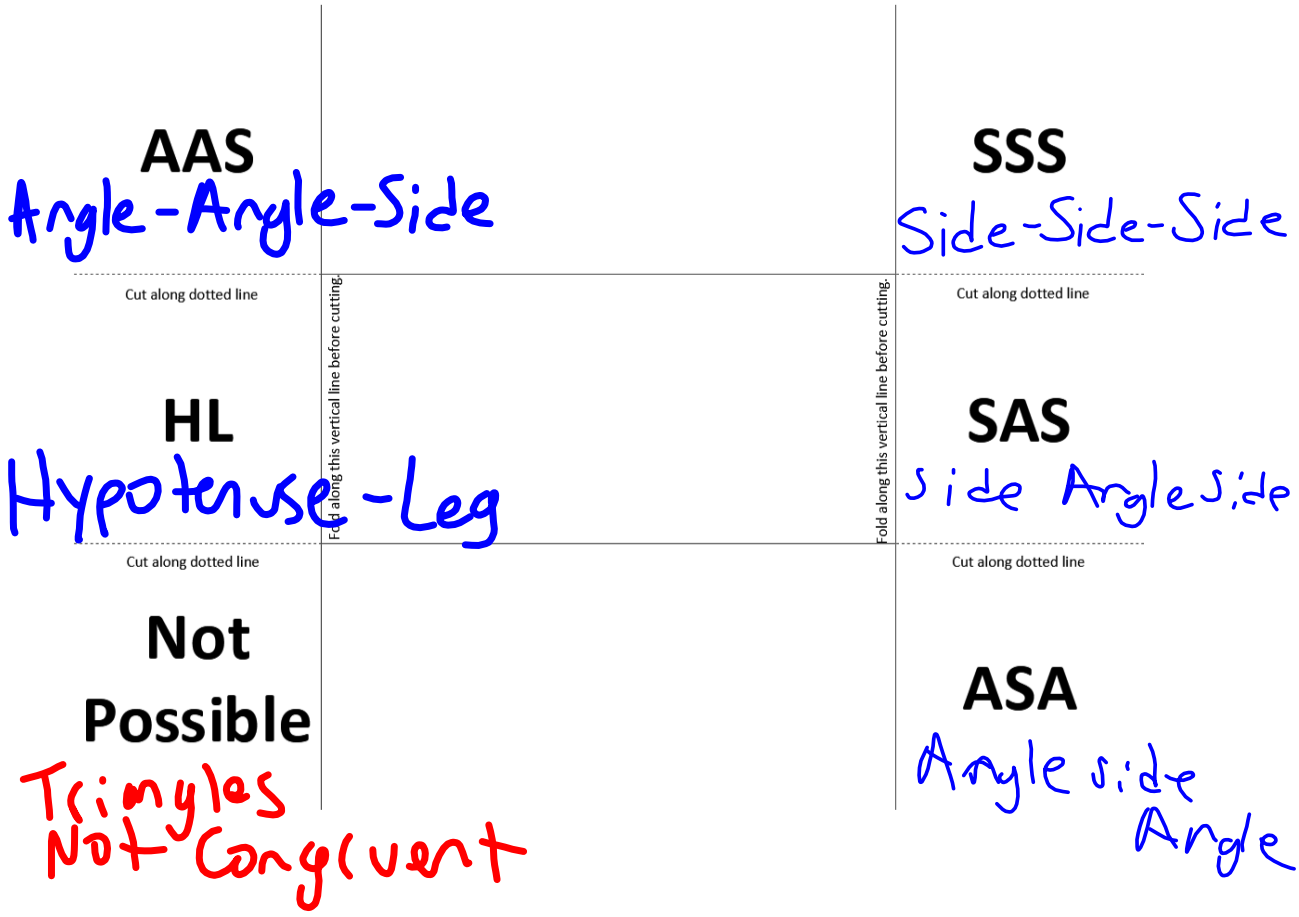
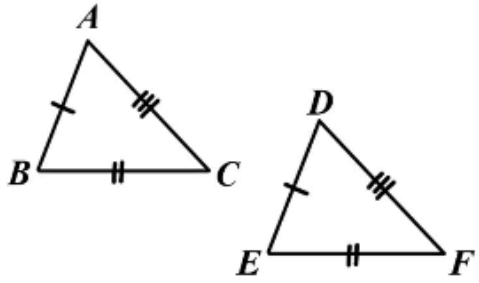

AAS
Angle-Angle-Side
SSS
Side-Side-Side
Cut along dotted line
Cut along dotted line
Fold along this vertical line before cutting.
Fold along this vertical line before cutting.
HL
Hypotenuse-Leg
SAS
Side Angle Side
Cut along dotted line
Cut along dotted line
Not Possible
Triangles Not Congruent
ASA
Angle Side Angle

If all three sides of one triangle are congruent to all three sides of another triangle, then the two triangles are congruent.

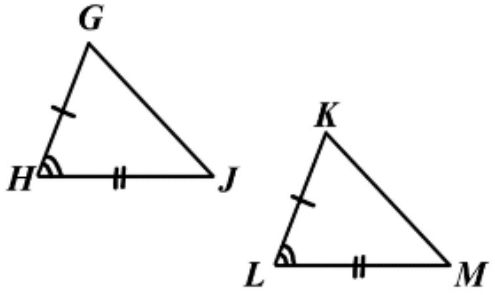


Sides #1: $\overline{AB} \cong \overline{DE}$

Sides #2: $\overline{BC} \cong \overline{EF}$

Sides #3: $\overline{AC} \cong \overline{DF}$

If 2 sides and the included angle of one triangle are congruent to 2 sides and the included angle of another triangle, then the two triangles are congruent

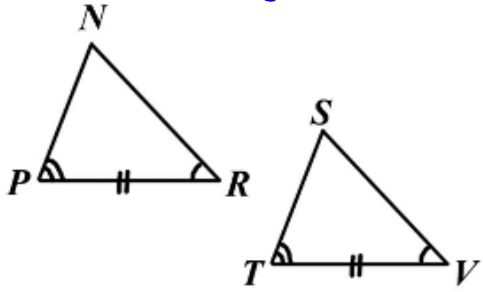


Sides #1: $\overline{GH} \cong \overline{KL}$

Angles (Included): $\angle H \cong \angle L$

Sides #2: $\overline{HJ} \cong \overline{LM}$

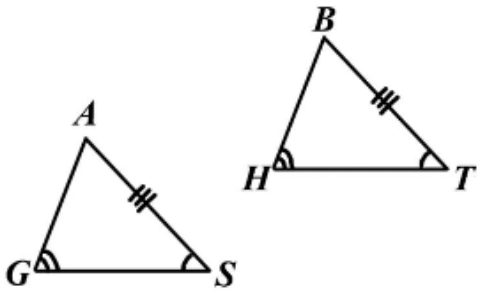
If 2 angles and the included side of one triangle are congruent to 2 angles and the included side of another triangle, then the two triangles are congruent.



Angles #1: $\angle R \cong \angle V$

Sides (Included): $\overline{PR} \cong \overline{TV}$

Angles #2: $\angle P \cong \angle T$



Angles #1:

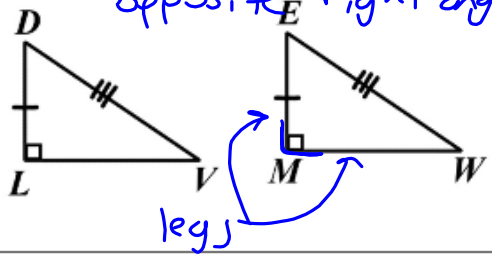
Angles #2:

Sides (Non-Included):

If 2 angles and the non-included side of one triangle are congruent to 2 angles and the non-included side of another triangle, then the two triangles are congruent.

---

hypotenuse is side opposite right angle

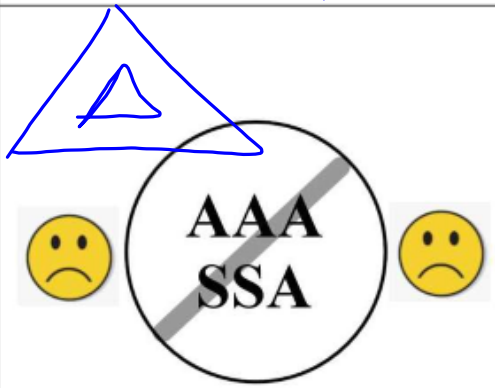


Right Angles: $\angle L \cong \angle M$

Hypotenuses: $\overline{DV} \cong \overline{EW}$

Legs: $\overline{DL} = \overline{EM}$

If the hypotenuse and one legs of a right triangle are congruent to the hypotenuse and one leg of another right triangle, then the two triangles are congruent.

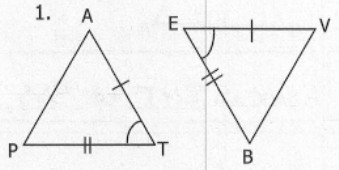


Other combination of sides and angles do not work for proving triangle congruency. Two common examples are AAA and SSA.

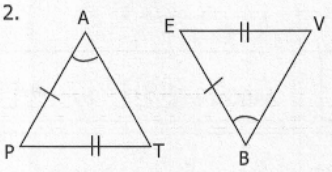
Geometry Name: KEY

Proving Triangles Congruent: ASA, AAS, SAS, SSS Period: _____

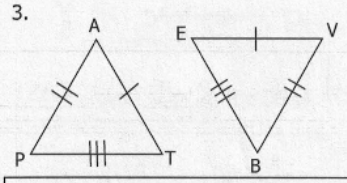
For each situation, Pat and Bev were given the same information to create a triangle. This is shown by the markings on each triangle. Determine if they were FORCED to create the SAME triangle (congruent triangles) or if the triangles are not necessarily identical. ***If they are congruent, list the triangle congruence theorem as well.***

1. 

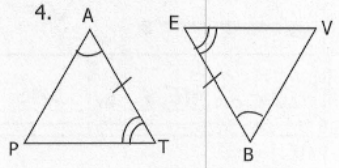
Triangles Congruent by SAS
___Triangles Not Necessarily Congruent

2. 

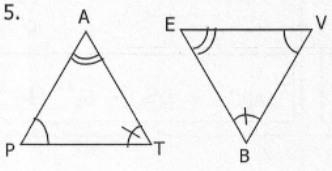
Triangles Congruent by _____
X Triangles Not Necessarily Congruent
NO SSA

3. 

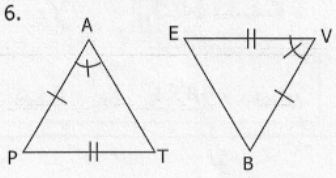
Triangles Congruent by SSS
___Triangles Not Necessarily Congruent

4. 

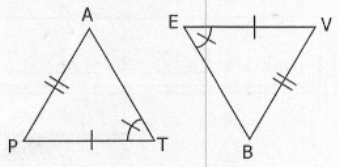
Triangles Congruent by ASA
___Triangles Not Necessarily Congruent

5. 

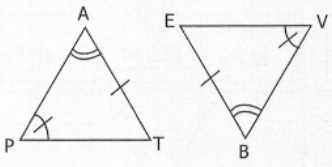
Triangles Congruent by _____
X Triangles Not Necessarily Congruent
NO AAA

6. 

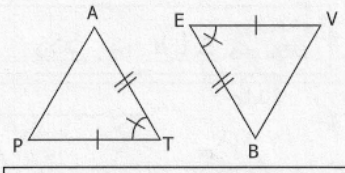
Triangles Congruent by _____
X Triangles Not Necessarily Congruent
NO SSA

7. 

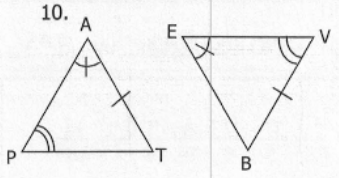
Triangles Congruent by _____
X Triangles Not Necessarily Congruent
NO SSA

8. 

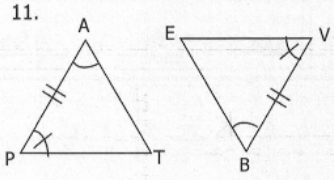
Triangles Congruent by AAS
___Triangles Not Necessarily Congruent

9. 

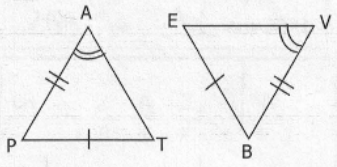
Triangles Congruent by SAS
___Triangles Not Necessarily Congruent

10. 

Triangles Congruent by AAS
___Triangles Not Necessarily Congruent

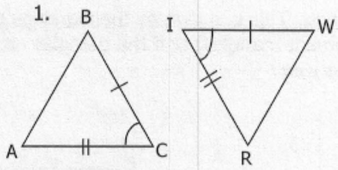
11. 

Triangles Congruent by ASA
___Triangles Not Necessarily Congruent

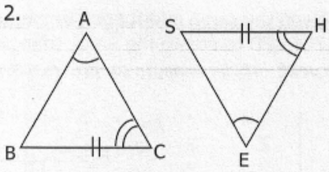
12. 

Triangles Congruent by _____
X Triangles Not Necessarily Congruent
NO SSA

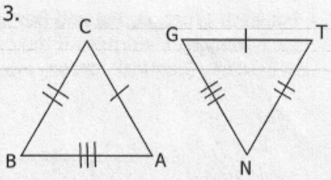
For each problem give the correct naming order of the congruent triangles. Write that name in order on the lines for the problem number (see box at bottom). Also, indicate which postulate or theorem is being used.

1.


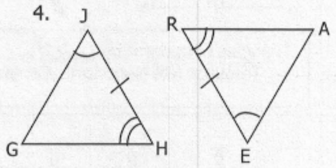
$\triangle ABC \cong \triangle$ RWI by SAS

2.


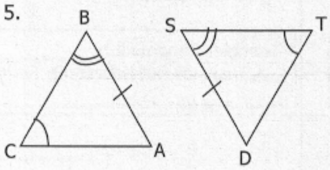
$\triangle ABC \cong \triangle$ ESH by AAS

3.


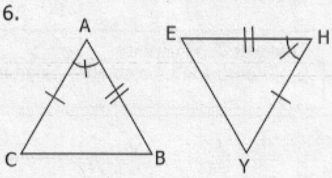
$\triangle ABC \cong \triangle$ GNT by SSS

4.


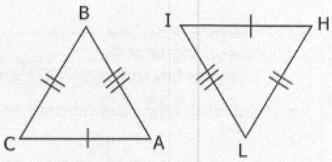
$\triangle GHJ \cong \triangle$ ARE by ASA

5.


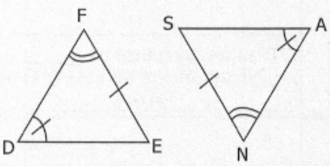
$\triangle ABC \cong \triangle$ DST by AAS

6.


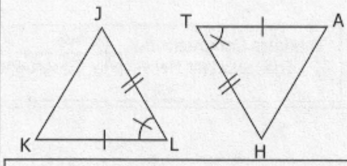
$\triangle ABC \cong \triangle$ HEY by SAS

7.


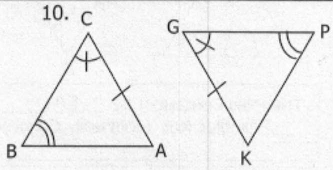
$\triangle ABC \cong \triangle$ ILH by SSS

8.


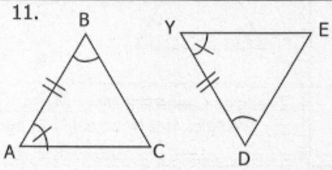
$\triangle DEF \cong \triangle$ ASN by AAS

9.


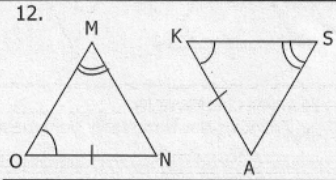
$\triangle JKL \cong \triangle$ HAT by SAS

10.


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

11.


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

12.


$\triangle MNO \cong \triangle$ 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 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 .

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		11	11		11

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

||| |||| || ||
✓ ✓ ✓ ✓

ANSWER:

A REASON SNAKES SHED IS THAT THEY KEEP GROWING UNTIL THEY DIE!!