Triangle Congruence Activity

Go to site http://bit.ly/2spKTHt (may have to click to allow adobe flash)

For each of the following Align the matching letters and turn the ends to make a triangle. Follow the steps given.

1. Select: Sides AB, BC, and AC. Were you able to create a non-congruent triangle using three sides (SSS)? Is congruence guaranteed?

No, I was not able to create a non-congruent triangle.

Yes, congruence is guaranteed.

2.Select: Sides AB, BC, and Angle A Were you able to create a non-congruent triangle using two sides and an non-included angle (SSA)? Is congruence guaranteed?

Yes, I was able to create a non-congruent triangle. No, congruence is not guaranteed

3. Select: Sides AB, AC and Angle A. Were you able to create a non-congruent triangle using two sides and an included angle (SAS)? Is congruence guaranteed?

No, I was not able to create a non-congruent triangle.

Yes, congruence is guaranteed.

4. Select: Angles A, B and Side AB. Were you able to create a non-congruent triangle using two angles and an included side (ASA)? Is congruence guaranteed?

No, I was not able to create a non-congruent triangle.

Yes, congruence is guaranteed.

5. Select: Angles A, B and Side AC.Were you able to create a non-congruent triangle using two angles and an non-included side (AAS)? Is congruence guaranteed?

No, I was not able to create a non-congruent triangle.

Yes, congruence is guaranteed.

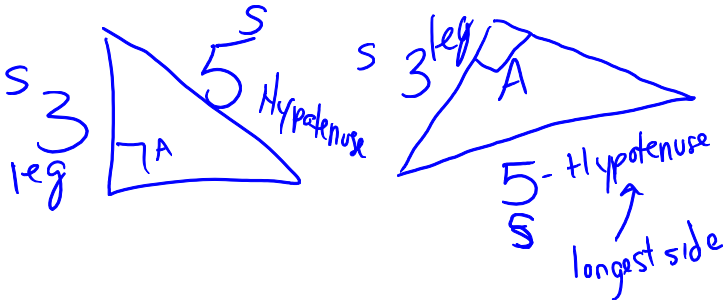
6. Select: Angles A, B and C. Were you able to create a non-congruent triangle using three angles (AAA)? Is congruence guaranteed?

Yes, I was able to create a non-congruent triangle. No, congruence is not guaranteed

7. Summary: Which of the above combinations guaranteed triangle congruence?

SSS, SAS, ASA, AAS

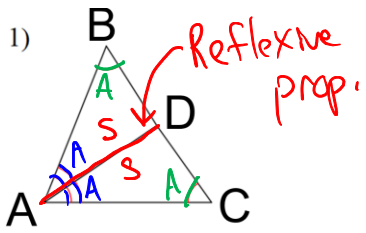
8. Special Property with right triangles.



This is SSA, but that does not prove congruence for all triangles. It does however prove for right triangles and is called HL, for Hypotenuse Leg.

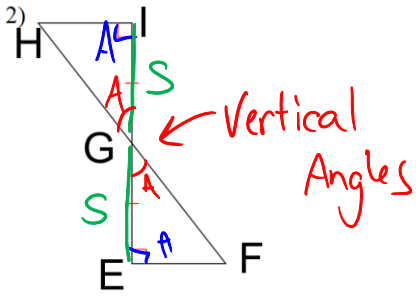
9. Determine if the following triangles are congruent, explain what theorem you would use.

1)



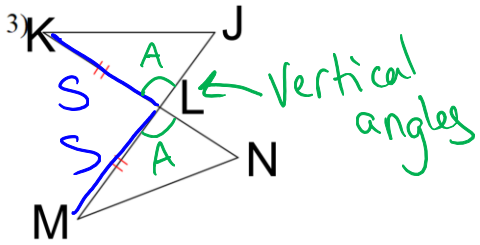
Yes, by AAS

2)



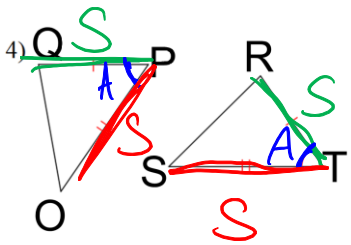
Yes, by ASA

3)



Not enough info to prove congruence

4)



Yes, SAS