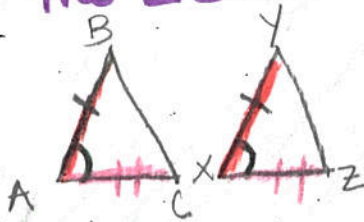


# Triangle Congruence Tree

**Theorem SAS**  
 side-angle-side  
 Key points: 2 sides  
 1 angle between  
 the 2 sides



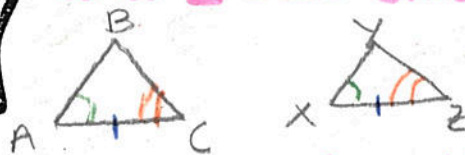
$$\triangle ABC \cong \triangle XYZ$$

**Theorem SSS**  
 side-side-side  
 Key point: 3 sides  
 All congruent



$$\triangle ABC \cong \triangle XYZ$$

**Theorem ASA**  
 angle-side-angle  
 Key points: 2 angles  
 and 1 side (included side)

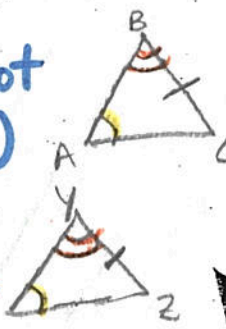


$$\triangle ABC \cong \triangle XYZ$$

**Theorem AAS**  
 Key points angle-angle  
 side

- 2 angles
- 1 side (not included)

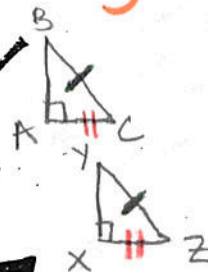
$$\triangle ABC \cong \triangle XYZ$$



**Theorem HL**  
 hypotenuse-leg

\* for right triangles only  
 Key points

- hypotenuse
- either side



$$\triangle ABC \cong \triangle XYZ$$

Proving  
 that 2  
 Triangles  
 are  
 Congruent

