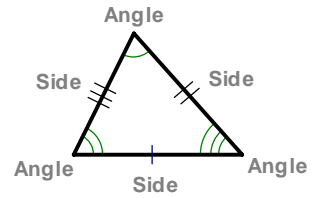# Geometry SOL Practice
Topic #6: Congruent Triangles
Notes

A triangle has six parts – 3 sides and 3 angles.
Between any two sides is an angle. Between any two angles is a side.

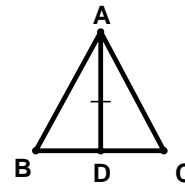**Methods:** If the two triangles have the following markings, then choose that method.

Side, **S**ide, **S**ide	**S**ide, **A**ngle, **S**ide	**A**ngle, **S**ide, **A**ngle	**A**ngle, **S**ide, **A**ngle
All 3 sides congruent	Two sides congruent and the angle between them.	Two angles congruent and the side between them.	Two angles congruent and the side *not* between them.

Note:

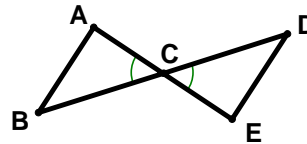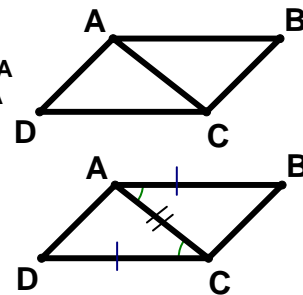| **Reflexive Side** – If two triangles share a side, then that side is to be marked as a congruent part. $\overline{AD}$ of $\triangle ADB$ is $\cong$ to $\overline{AD}$ of $\triangle ADC$ $$\overline{AD} \cong \overline{AD}$$	
Vertical Angles – If two triangles are formed by intersecting segments, then the vertical angles belonging to the triangles are to be marked. $$\angle ACB \cong \angle ECD$$	

Steps:

1. Mark the Given information.
2. Mark the Reflexive Side or Vertical Angles (if they are relevant).
3. Choose a method based on these markings.

Hint: If the triangles overlap, redraw them as separate triangles and then follow the steps.

Prove: $\triangle ADB \cong \triangle BCA$

Exanple:

Given: $\overline{AB} \cong \overline{CD}$
$\angle BAC \cong \angle DCA$
Prove: $\triangle ABC \cong \triangle CDA$

A. **SSS**
☑ B. **SAS**
C. **ASA**
D. **AAS**