

Notes - Day 3 Triangle Congruence ASA, AAS

1) Congruent Triangles are two triangles that have three congruent angles, and three congruent sides.

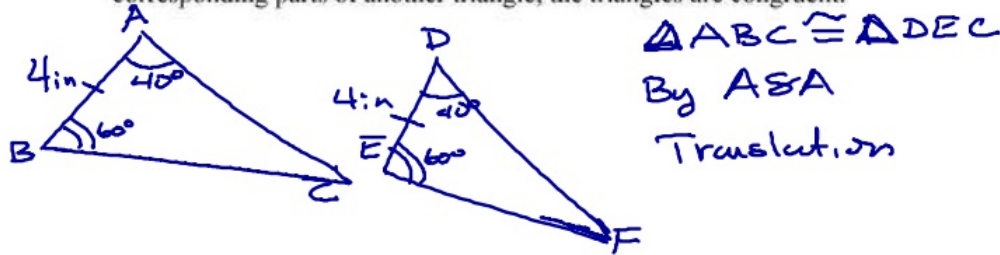
When naming congruent triangles, always name them in $\triangle ABC \cong \triangle DEF$.

If the Triangles are congruent, then you can also state the transformation from the original triangle as a translation, reflection, or rotation.

Two type of Triangle Congruence:

ASA (Angle-Included Side-Angle):

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

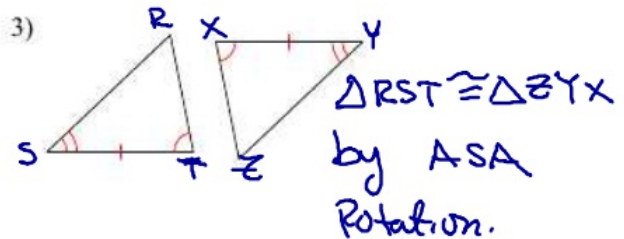
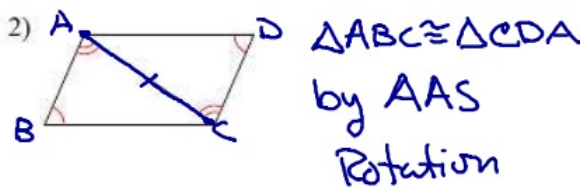


AAS (Angle-Angle-Side)

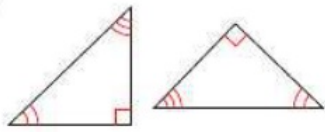
If two angles and the non-included side of one triangle are congruent to the corresponding parts of another triangle, the triangles are congruent



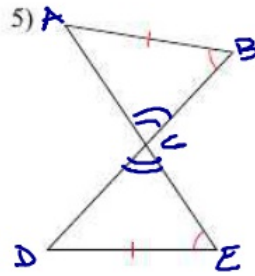
Given two angles and a side, determine if the two triangles are congruent. State how you know. If they are, state the congruence and the transformation.



4)

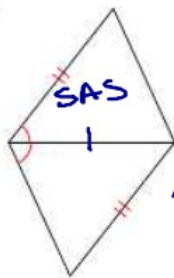


Not congruent
missing side

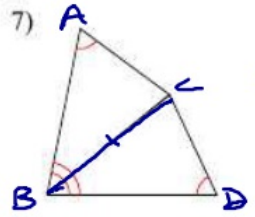


$\triangle ABC \cong \triangle DEC$
by AAS
Reflection.

6)

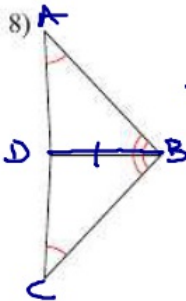


Not Congruent
No Second angle.

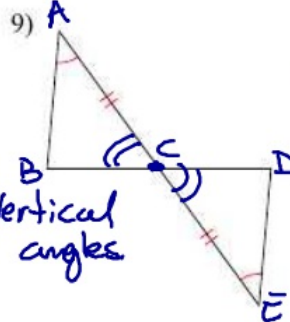


$\triangle ABC \cong \triangle DCB$
by AAS
Reflection.

8)

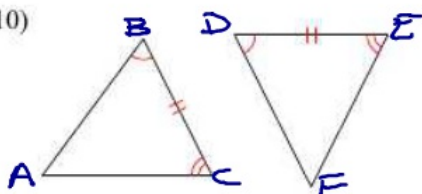


$\triangle ABD \cong \triangle CBD$
by AAS
Reflection



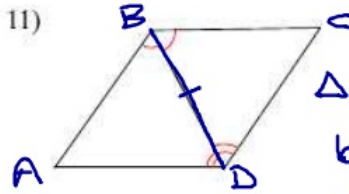
$\triangle ABC \cong \triangle DEC$
by ASA
Rotation

10)



$\triangle ABC \cong \triangle FDE$
by ASA
Rotation

11)



$\triangle ABD \cong \triangle CBD$
by ASA
Reflection.