Geometry Practice: G.G.28 #7
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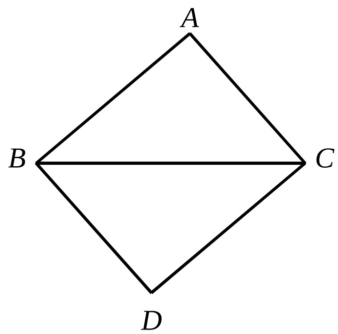
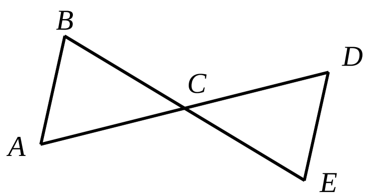
NAME:______________________________

P.I. G.G.28: Determine the congruence of two triangles by using one of the five congruence techniques (SSS, SAS, ASA, AAS, HL), given sufficient information about the sides and/or angles of two congruent triangles

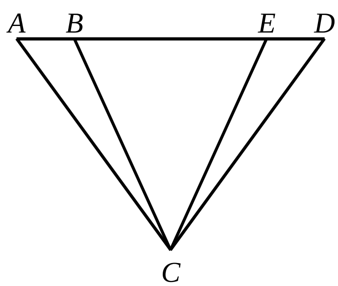
1. Given: $\overline{AB} \cong \overline{DC}$ and $\overline{AC} \cong \overline{DB}$. Prove: $\Delta ABC \cong \Delta DCB$.



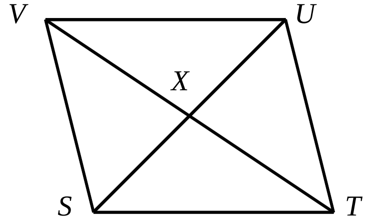
2. $\overline{AC} \cong \overline{DC}$ and $\overline{BC} \cong \overline{CE}$. Prove $\Delta ABC \cong \Delta DEC$.



3. $\overline{AC} \cong \overline{DC}$ and $\overline{BA} \cong \overline{ED}$. Prove $\Delta ABC \cong \Delta DEC$.



4. Given: $\overline{SV} \cong \overline{TU}$ and $\overline{SV} \parallel \overline{TU}$
   Prove: $VX = XT$



[1] $\overline{BC}$ is congruent to $\overline{CB}$ by the reflexive property. So ΔABC is congruent to ΔDCB by SSS.

[2] $\angle ACB \cong \angle DCE$ because they are vertical angles. So $\Delta ABC \cong \Delta DEC$ by SAS.

[3] $\angle A \cong \angle D$ because they are base angles of isosceles ΔCAD. So $\Delta ABC \cong \Delta DEC$ by SAS.

[4]

1. $\overline{SV} \cong \overline{TU}$ and $\overline{SV} \parallel \overline{TU}$	1. Given
2. $STUV$ is a parallelogram	2. If one pair of opp. sides of a quad. are both $\parallel$ and $\cong$, then the quad is a parallelogram.
3. $VX = XT$	3. The diagonals of a parallelogram bisect each other.