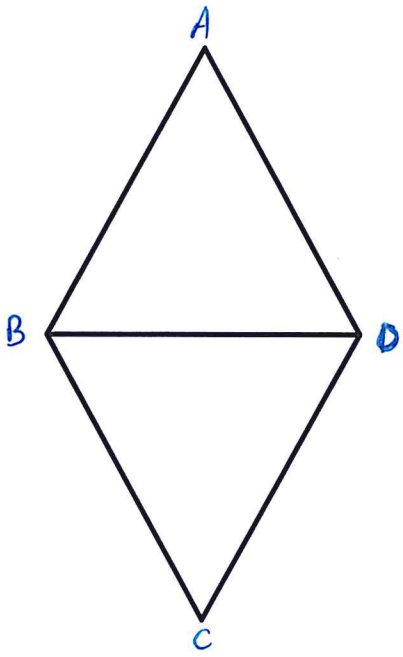
Geometric Proofs

Emphasis on Congruence by Angle – Angle – Side

Prove each of the following using Angle – Angle – Side:

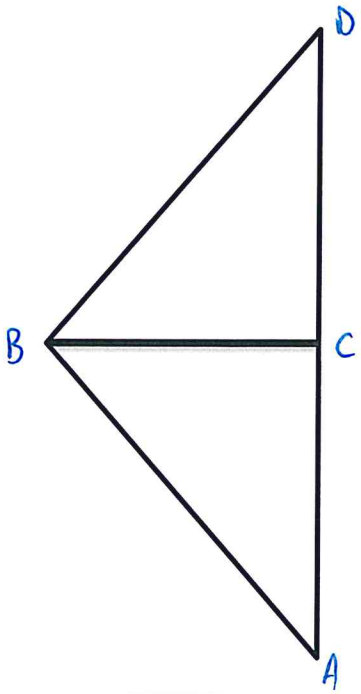
1. **Given:** $\overline{AB} \,||\, \overline{CD}$
   $\overline{DA} \,||\, \overline{BC}$
   $\overline{AD} \cong \overline{CB}$

   Prove: Δ ABC ≅ Δ DBC

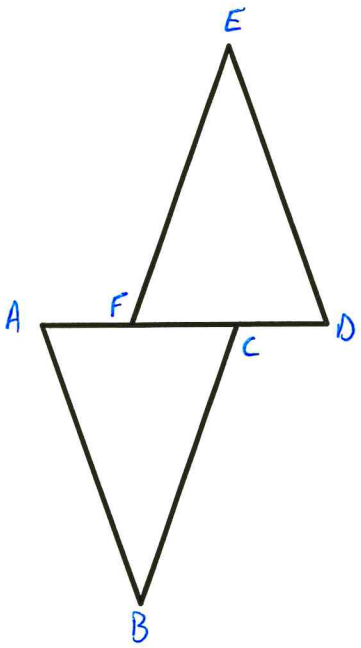


2. **Given:** $\overline{BC} \perp \overline{AD}$
   Δ ABD is an Isosceles Triangle

   Prove: Δ ABC ≅ Δ DBC



3. **Given:** $\overline{AB} \,||\, \overline{ED}$
$\overline{EF} \,||\, \overline{CB}$
$\overline{AB} \cong \overline{DE}$
Prove: Δ ABC ≅ Δ DEF



4. **Given:** $\overline{AB} \,||\, \overline{ED}$
C is the midpoint of $\overline{AD}$ & $\overline{BE}$

Prove: Δ ABC ≅ Δ DEC