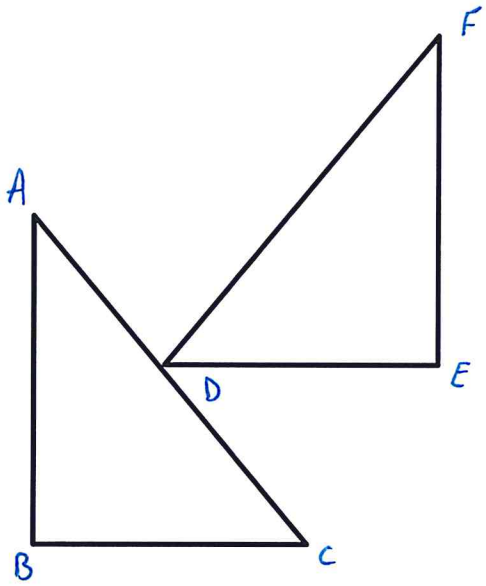
Geometric Proofs

Emphasis on Congruence by Hypotenuse - Leg

Prove each of the following using Hypotenuse - Leg:

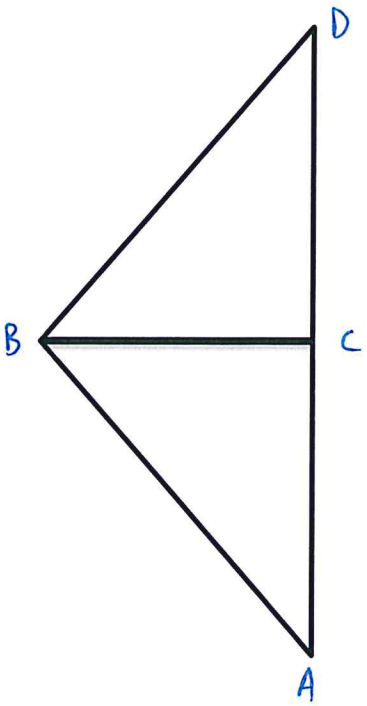
1. **Given:** $\overline{AB} \perp \overline{BC}$
   $\overline{FE} \perp \overline{DE}$
   $\overline{AC} \cong \overline{FD}$
   $\overline{BC} \cong \overline{ED}$

   Prove: Δ ABC ≅ Δ FED

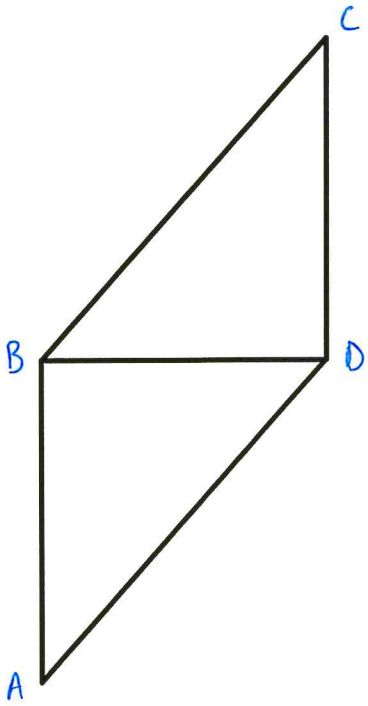


2. **Given:** $\overline{BC} \perp \overline{AD}$
   Δ ABD is an Isosceles Triangle

   Prove: Δ ABC ≅ Δ DBC



3. **Given:** $\overline{BD} \perp \overline{CD}$
$\overline{BD} \perp \overline{AB}$
$\overline{AD} \cong \overline{CB}$
Prove: Δ BCD ≅ Δ DBA



4. **Given:** $\overline{BE} \perp \overline{AD}$
C is the midpoint of $\overline{AD}$
$\overline{AB} \cong \overline{DE}$
Prove: Δ ABC ≅ Δ DEC