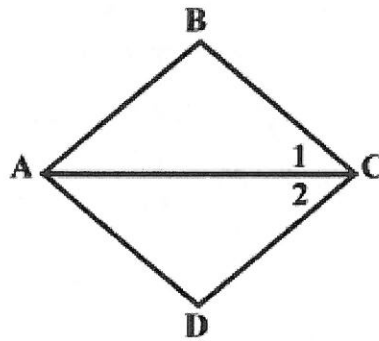


5.3 Proving Triangles are Congruent

1)

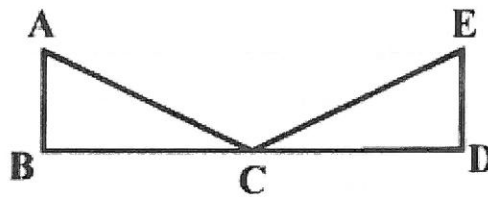


Given: $\overline{BC} \cong \overline{CD}$

\overline{AC} bisects $\angle BCD$

Prove: $\triangle ABC \cong \triangle ADC$

2)



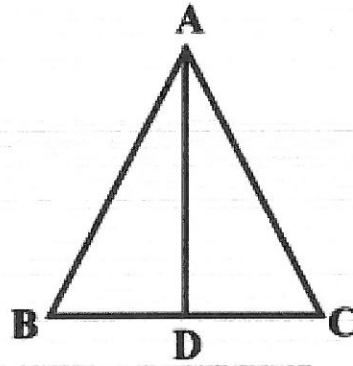
Given: $\overline{AB} \cong \overline{ED}$

C is midpoint \overline{BD}

$\overline{AB} \perp \overline{BD}$; $\overline{ED} \perp \overline{BD}$

Prove: $\triangle ABC \cong \triangle EDC$

3)

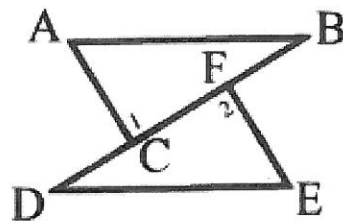


Given: $\overline{AB} \cong \overline{AC}$

\overline{AD} bisects \overline{BC}

Prove: $\triangle ABD \cong \triangle ACD$

4)

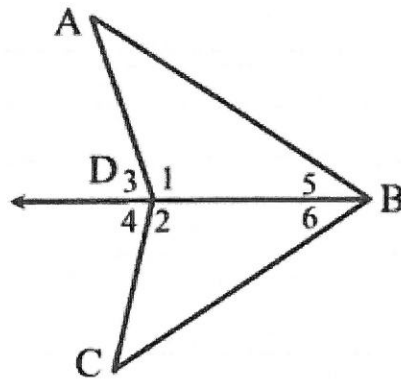


Given: $\overline{AC} \perp \overline{DB}$; $\overline{EF} \perp \overline{DB}$

$\overline{AC} \cong \overline{EF}$; $\angle A \cong \angle E$

Prove: $\angle B \cong \angle D$

5)



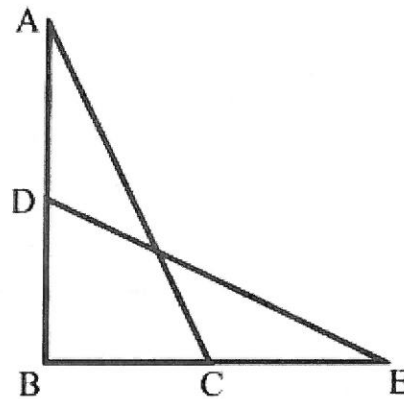
Given: \overline{BD}

$\overline{AD} \cong \overline{CD}$

$\angle 3 \cong \angle 4$

Prove: \overline{DB} bisects $\angle ABC$

6)

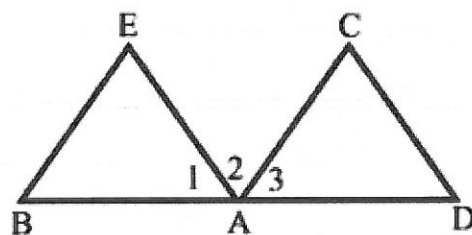


Given: $\angle A \cong \angle E$

$\overline{AB} \cong \overline{BE}$

Prove: $\overline{AD} \cong \overline{EC}$

7)



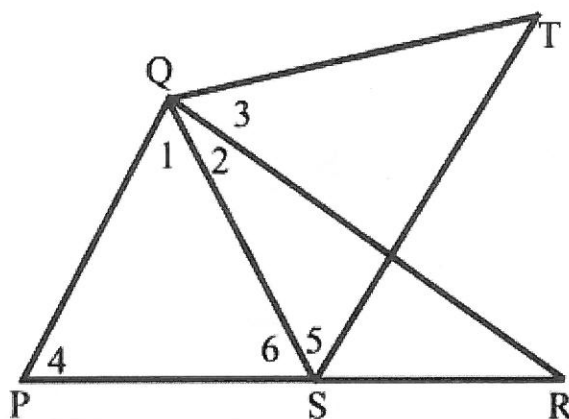
Given: $\angle BAC \cong \angle DAE$

$\overline{AE} \cong \overline{AC}$

A is midpoint \overline{BD}

Prove: $\triangle BEA \cong \triangle DCA$

8)



Given: $m\angle 4 = m\angle 6$

$m\angle 1 = m\angle 3$

$m\angle 4 = m\angle 5$

Prove: $\angle R \cong \angle T$