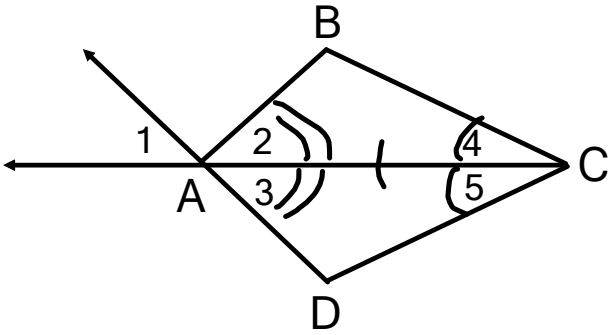
MORE PROOF PRACTICE

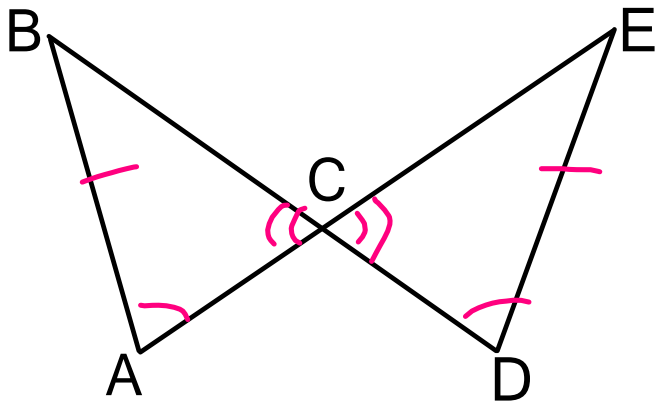
Prove:

$\overline{BC} \cong \overline{DC}$



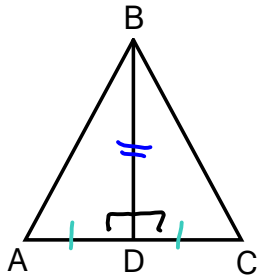
Statements	Reasons
① $\angle 2 \cong \angle 1$, $\angle 4 \cong \angle 5$	① given
② $\overline{AC} \cong \overline{AC}$	② reflexive prop.
③ $\angle 1 \cong \angle 3$	③ vert $\angle$s $\cong$
④ $\angle 2 \cong \angle 3$	④ transitive prop.
⑤ $\triangle ABC \cong \triangle ADC$	⑤ ASA
⑥ $\overline{BC} \cong \overline{DC}$	⑥ CPCTC

Prove:
$\overline{CA} \cong \overline{CD}$



Statements	Reasons
① $\angle A \cong \angle D$, $\overline{AB} \cong \overline{DE}$	① given
② $\angle ACB \cong \angle DCE$	② vert $\angle$s $\cong$
③ $\triangle BCA \cong \triangle BCD$	③ AAS
④ $\overline{CA} \cong \overline{CD}$	④ CPCTC

Prove:
$\overline{AB} \cong \overline{CB}$



Statements	Reasons
① $\overline{BD} \perp \overline{AC}$, D bisects $\overline{AC}$	① given
② $\angle ADB$ & $\angle CDB$ are right$\angle$s	② def of $\perp$
③ $\overline{AD} \cong \overline{DC}$	③ def of bisect
④ $\angle ADB \cong \angle CDB$	④ all right $\angle$s $\cong$
⑤ $\overline{BD} \cong \overline{BD}$	⑤ reflexive prop
⑥ $\triangle BAD \cong \triangle BCD$	⑥ SAS
⑦ $\overline{AB} \cong \overline{CB}$	⑦ CPCTC