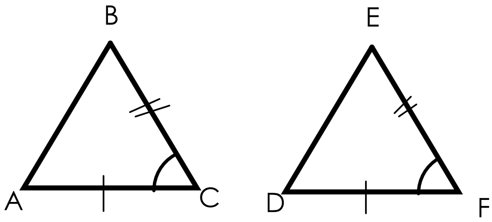
2.6 Corresponding Parts of Congruent Triangles

More Essential Theorems in Geometry

CPCTC

Corresponding parts of Congruent Triangles are Congruent



How can we prove $\overline{AB} = \overline{DE}$?

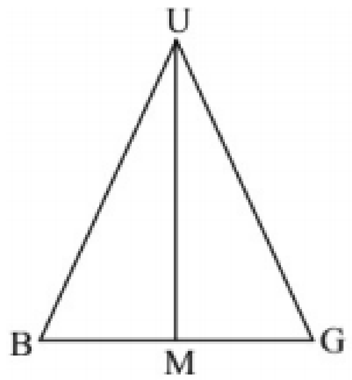
Step 1: Prove $\triangle ABC = \triangle DEF$

Step 2: Corresponding Parts of Congruent Triangles must be congruent

Given: $\overline{BU} \cong \overline{UG}$

$\overline{UM}$ bisects $\overline{BG}$

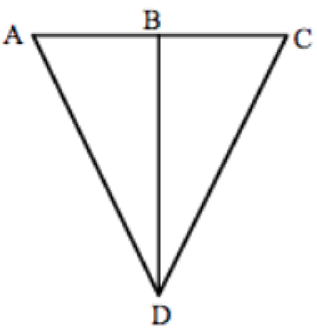
Prove: $\angle BUM \cong \angle MUG$



Given: $\overline{AC} \perp \overline{BD}$

$\overline{AB} \cong \overline{BC}$

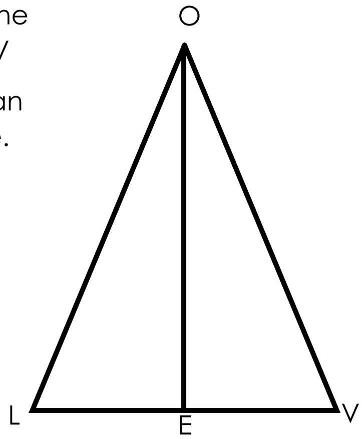
Prove: $\overline{AD} \cong \overline{CD}$



Advanced Proofs

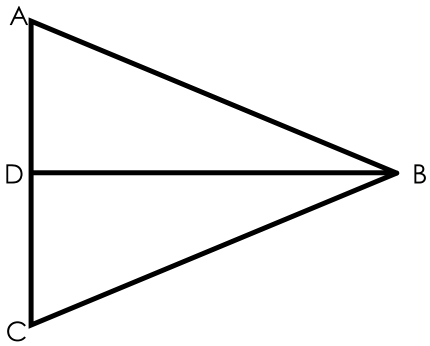
Given: E is the midpoint of $\overline{LV}$ and $\overline{OE}$ is the altitude of △ LOV

Prove: △ LOV is an isosceles triangle.



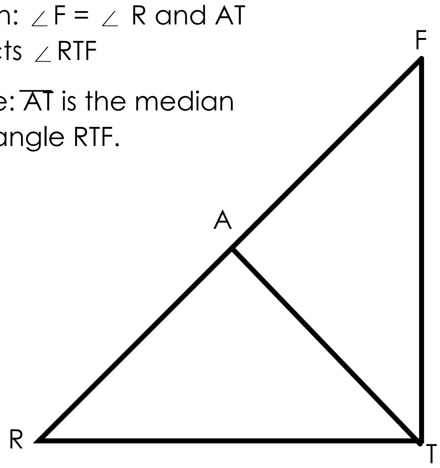
Given: $\overline{BD}$ is the perpendicular bisector of $\overline{AC}$

Prove: $\overline{BD}$ bisects ∠ B



Given: ∠ F = ∠ R and $\overline{AT}$ bisects ∠ RTF

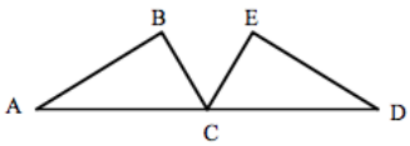
Prove: $\overline{AT}$ is the median of triangle RTF.



Independent Practice

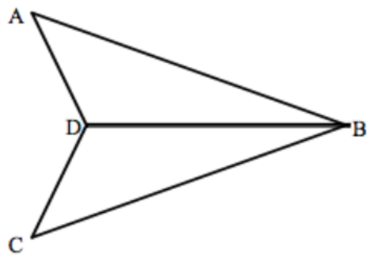
Given: $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EC}$,
C is the midpoint of $\overline{AD}$

Prove: $\angle A \cong \angle D$



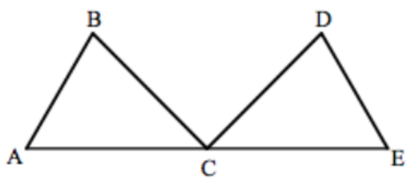
Given: $\overline{DB}$ bisects $\angle ABC$
$\overline{AB} \cong \overline{CB}$

Prove: $\angle A \cong \angle C$



Given: C bisects $\overline{AE}$
$\angle$B and $\angle$D are right angles
$\angle A \cong \angle E$

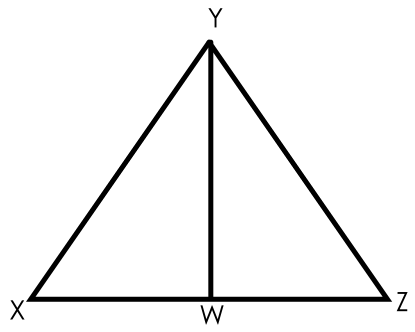
Prove: $\overline{BC} \cong \overline{DC}$



Given: $\overline{YW}$ bisects $\overline{XZ}$

$\overline{XY} = \overline{YZ}$

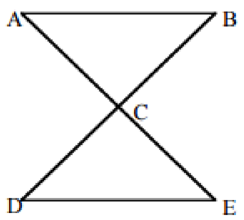
Prove: YW bisects $\angle Y$



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

C bisects $\overline{BD}$

Prove: C is the midpoint of AE



Given: $\overline{AD}$ bisects $\measuredangle BAC$

$\overline{AD} \perp \overline{BC}$

Prove: $\overline{AD}$ is the median of triangle ABC