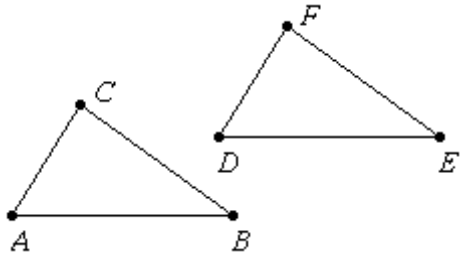
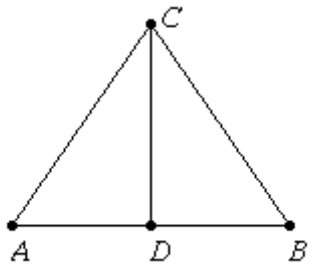
4-7: Proving Triangles Congruent Using Side, Side, Side



Postulate: Two triangles are congruent if three sides of one triangle are congruent, respectively, to three sides of the other. (**SSS**)

Example:



Given: Isosceles triangle ΔABC,

$\overline{AC} \cong \overline{BC}$ and

D the midpoint of $\overline{AB}$

Prove: $\Delta ACD \cong \Delta BCD$

Plan: S

S

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Proof:	***Statements***	***Reasons***
S	1. $\overline{AC} \cong \overline{BC}$	
	2.	Given
S	3. $\overline{AD} \cong \overline{BD}$	
S	4.	Reflexive Property
	$\therefore \Delta ACD \cong \Delta BCD$	

Homework: