

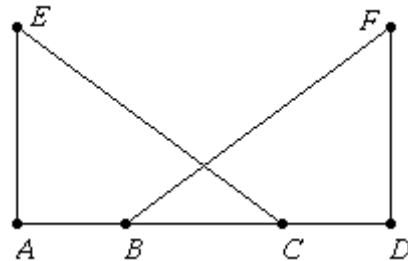
5-2: Using Congruent Triangles to Prove Line Segments Congruent and Angles Congruent

- To prove corresponding parts of two triangles congruent, we first prove the triangles congruent, and then use the definition of congruent triangles, which tells us that all of the corresponding sides and angles of the two triangles are congruent.

Example:

Given: \overline{ABCD} , $\angle A$ is a right angle,
 $\angle D$ is a right angle, $\overline{AE} \cong \overline{DF}$,
 $\overline{AB} \cong \overline{CD}$

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



- \overline{EC} and \overline{FB} are corresponding parts of triangles _____ and _____.
- Prove these triangles congruent.

Plan: S _____ A _____ S _____

<i>Proof:</i>	<i>Statements</i>	<i>Reasons</i>
S	1. $\overline{AE} \cong \overline{DF}$	
	2. $\angle A$ and $\angle D$ are right angles	
A	3.	Th: Right angles \rightarrow congruence
	4.	Given
	5.	Reflexive Postulate
	6.	Addition Postulate
	7.	Partition Postulate
S	8.	Substitution Postulate
	9. $\triangle EAC \cong \triangle FDB$	ASA
	\therefore	Definition of Congruent Triangles