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Proof #6

Given:  $\overline{ED} \cong \overline{BC}$ ,  $\overline{AD} \cong \overline{CF}$ ,  $\overline{EF} \perp \overline{FD}$ ,  $\overline{CA} \perp \overline{AB}$   
Prove:  $\triangle ABC \cong \triangle FED$

1)	$\overline{ED} \cong \overline{BC}$ , $\overline{AD} \cong \overline{CF}$ , $\overline{EF} \perp \overline{FD}$ , $\overline{CA} \perp \overline{AB}$	Given
2)	$\angle EFD$ and $\angle BAC$ are right angles	def. of perp. lines
3)	$\triangle ABC$ and $\triangle FED$ are right triangles	def. of Rt. $\triangle$ 's
4)	$CF + CD = FD$ ; $CD + AD = CA$	Seg. Add. Post.
5)	$CF = AD$	def. of $\cong$
6)	$FD = CD + AD$	substitution
7)	$FD = CA$	substitution
8)	$\overline{FD} \cong \overline{CA}$	def. of $\cong$
9)	$\triangle ABC \cong \triangle FED$	HL $\cong$ theorem

