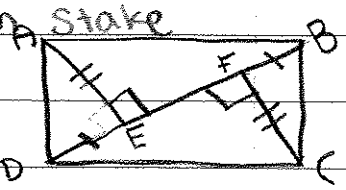
Proof 7 Noah Stake

Given: $DE = BF$; $AE = CF$; $\overline{AE} \perp \overline{DB}$; $\overline{CF} \perp \overline{BD}$

Prove: $\triangle AEB \cong \triangle CFD$



(1)	$DE = BF$; $AE = CF$; $\overline{AE} \perp \overline{DB}$; $\overline{CF} \perp \overline{BD}$	Given
(2)	$m\angle AEB = 90^\circ$; $m\angle CFD = 90^\circ$	Def. of perp.
(3)	$m\angle AEB = m\angle CFD$	Trans.
(4)	$\angle AEB \cong \angle CFD$	Def. of congr.
(5)	$EB = EF + FB$; $DE + EF = DF$	Seg. Add. Post.
(6)	$EF + DE = EB$	Subst.
(7)	$DF = EB$	Subst.
(8)	$\overline{DF} \cong \overline{EB}$	Def. of congr.
(9)	$\overline{AE} \cong \overline{CF}$	Def. of congr.
(10)	$\triangle AEB \cong \triangle CFD$	SAS congr. post.