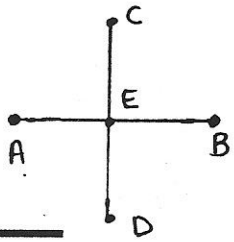
NAME:_____

Complete the proof by filling in the spaces. Note, the full statement of the postulate/Theorem must be given.

In the figure to the right, E is the midpoint of $\overline{AB}$ and $\overline{CD}$. If $AB = CD$, then prove $\overline{AE} \cong \overline{ED}$.



Statements	Reasons
1.E is the midpoint of $\overline{AB}$ and $\overline{CD}$ 1.b $AB = CD$	Given
2. $AE = EB$ and $CE = ED$	def. of midpt
3. $AE + EB = AB$ $CE + ED = CD$	Segment Addition Postulate
4. $AE + EB = CE + ED$	substitution
5. $AE + AE = ED + ED$	Substitution
6. $2AE = 2ED$	substitution
7. $AE = ED$	Division
9. $\overline{AE} \cong \overline{ED}$	def. of $\cong$ segments