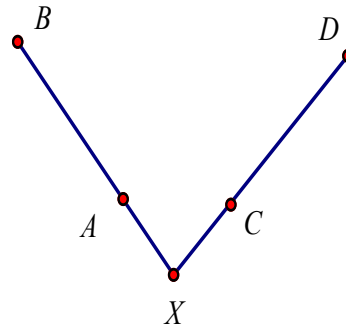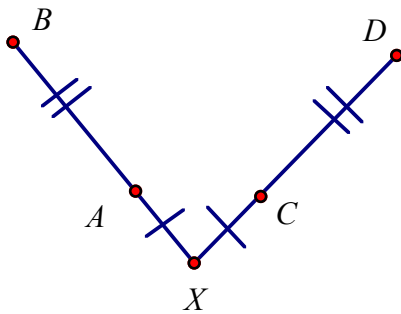**Example**

Given:
$$\overline{XAB}, \overline{XCD}$$
$$XA = XC$$
$$AB = CD$$

Prove:
$$XB = XD$$

Looking at what I want to prove, $XB = XD$, which are two line segments suggests that I might want to use the Segment Addition Postulate. Before I begin the T-Proof, let's mark on the diagram the segments that are equal.

Now we can see on the diagram XA=XC, and AB=CD. Knowing the sum of the parts is equal to the whole, we are ready to do the proof. We'll write what was given as the first step, then fill in the equalities we have on the diagram.

Now, as we do the proof we will keep referring back to the picture that was labeled and the equal parts identified.

STATEMENTS	REASONS
1. $\overline{XAB}, \overline{XCD}$	Given
XA = XC, AB = CD	
2. XA + AB = XC + CD	Add Prop Equality
3. XA + AB = XB	Segment Add Postulate
XC + CD = XD	
4. XB = XD	Substitution into step 2