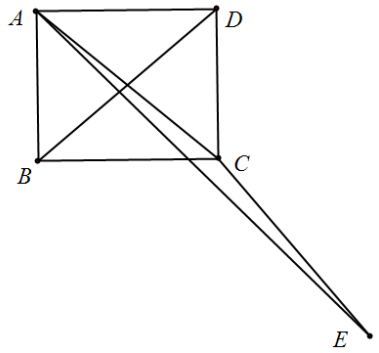
Example 1 2 : As shown in Figure 1, the quadrilateral $ABCD$ is a rectangle , $CE \perp BD$, AE is the bisector of $\angle BAD$, to prove: $CE = BD$.



Proof: Suppose $\dfrac{\dfrac{A-C}{A-E}}{\dfrac{E-A}{E-C}} = T$, $\dfrac{\dfrac{B-C}{A-E}}{\dfrac{A-E}{A-B}} = t_1$, $\dfrac{A+C-B-B}{C-E} = t_2$, $\dfrac{B-C}{A-B} = t_3$,

$$T = \frac{t_1\left(1-t_3{}^2\right)}{t_2 t_3}.$$

$$\frac{\dfrac{A-C}{A-E}}{\dfrac{E-A}{E-C}} = \frac{\dfrac{B-C}{A-E}}{\dfrac{A-E}{A-B}} \frac{\dfrac{A-C}{A-B}}{\dfrac{B-A}{B-D}} \frac{E-C}{D-B} \frac{B-A}{B-C}.$$