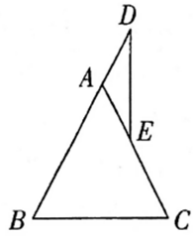
Example 1 79 : As shown in Figure 1 , in $\triangle ABC$, $AB = AC$, D is a point on the extension line of BA , E is on AC , and $AD = AE$, to prove: $DE \perp BC$.



$$\frac{C-B}{C-A}\frac{C-A}{B-A}\frac{E-D}{D-E}\left(\frac{E-D}{B-C}\right)^2=-1.$$