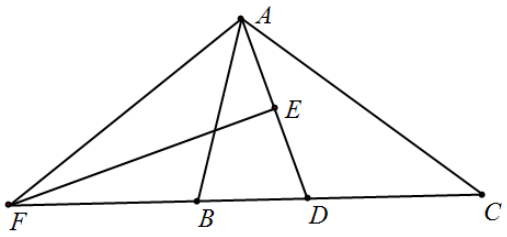
Example 160 : As shown in Figure 1, in $\triangle ABC$, $\angle B = 2\angle C$, the perpendicular line EF of $\angle BAC$ bisector AD intersects the extension line of CB at point F, to prove: $AF = AC$.



$$\frac{\frac{F-A}{B-C}}{\frac{C-B}{C-A}} = \frac{\frac{A-D}{A-B}\frac{C-B}{D-A}}{\frac{A-C}{A-D}\frac{A-D}{A-F}}\frac{\frac{B-A}{B-C}}{\left(\frac{C-B}{C-A}\right)^2},$$