



**Example 114 :** As shown in Figure 1,  $\triangle ABC$ ,  $AD$  bisects  $\angle BAC$ ,  $EF \perp AD$  meets  $G$ , intersects  $AB$  at  $E$ , intersects  $AC$  at  $F$ , intersects the extension line of  $BC$  at  $H$ . Proof:  $2\angle H = \angle ACB - \angle B$ .

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

$$2\angle H = 2(90^\circ - \angle ADH) = 2\left(90^\circ - \angle B - \frac{1}{2}\angle BAC\right) = 180^\circ - 2\angle B - \angle BAC = \angle ACB - \angle B$$