



**Example 1 77 :** As shown in Figure 1 , *in*  $\triangle ABC$ , *the* bisector of  $\angle C$  intersects  $AB$  at  $E$ , *the* parallel line drawn from  $E$  to  $BC$  intersects  $AC$  at  $F$ , *and the* bisector of the exterior angle of  $\angle C$  intersects at  $G$ , then  $E F = F G$ .

Proof: Suppose  $A = 0$ ,  $E = k B$ ,  $F = k C$ ,  $G = 2 F - E$ , 
$$\frac{\frac{C - G}{C - A}}{\frac{C - G}{C - E}} + \frac{\frac{C - E}{C - B}}{\frac{C - A}{C - B}} = 4k - 4k^2.$$

$C$  is the origin