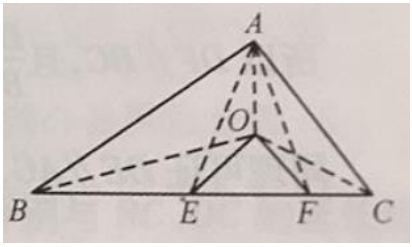

Example 1 27 : As shown in Figure 3, in $\triangle ABC$, 0 is the center, and points E and F are on the large side BC. It is known that $BF = BA, CE = CA$. Prove: $\angle EOF = \angle B + \angle C$.

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

Explanation: Note that O is the circumcenter of $\triangle AEF$, $2\angle EAF = \angle EOF$.