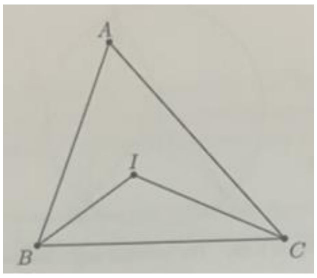

Example 60 : As shown in Figure 3, I is the heart of $\triangle ABC$, to prove: $\angle BIC = 90^\circ + \frac{1}{2}\angle A$.

Proof: $$\frac{\left(\frac{I-C}{I-B}\right)^2}{\frac{A-C}{A-B}} \frac{\frac{B-I}{B-C}}{\frac{B-A}{B-I}} \frac{\frac{C-B}{C-I}}{\frac{C-I}{C-A}} = -1.$$

Explanation: $\frac{\left(\frac{I-C}{I-B}\right)^2}{\frac{A-C}{A-B}} \in R$ Can only describe $2\angle BIC = \angle A$ or

$2\angle BIC - \angle A = 180^\circ$.

Method 1: With the aid of graphs, it is impossible to hold $\angle BIC > \angle A$ since $2\angle BIC = \angle A$.

Method 2: Further clarify the positive and negative of each item, not just judge whether it is a real number. **Among them, known conditions:** ∠IBC = ∠ ***ABI*** ; ***∠BCI*** $\Leftrightarrow \frac{\frac{B-I}{B-C}}{\frac{B-A}{B-I}} \in R^+$ = ∠ICA ; ***so*** $\Leftrightarrow \frac{\frac{C-B}{C-I}}{\frac{C-I}{C-A}} \in R^+$, $\frac{\left(\frac{I-C}{I-B}\right)^2}{\frac{A-C}{A-B}} \in R^-$ explain

$2\angle BIC - \angle A = 180^\circ$.