



**Example 73 :** As shown in Figure 3, in  $\triangle ABC$ , the inscribed circle  $I$  cuts  $BC$ ,  $AC$  at  $X$ ,  $Y$ , and  $BL \perp AI$  at  $L$ . Prove:  $X$ ,  $L$ ,  $Y$  are collinear.

$$\frac{X-L}{X-Y} = \left( \frac{L-X}{L-I} \frac{B-I}{B-X} \right) \frac{\frac{Y-C}{Y-X}}{\frac{I-C}{I-X}} \left( \frac{\frac{I-C}{I-B} \frac{B-X}{X-I}}{\frac{A-C}{A-I}} \right) \frac{L-I}{A-I} \frac{A-C}{Y-C}.$$

Description: used  $\angle BIC = 90^\circ + \frac{1}{2}\angle A$ . See above question.