



Example 74 : As shown in Figure 3, in $\triangle ABC$, O is the inner, AI , BL is the angle bisector, AJ is the outer angle bisector, $IA \perp IC$, $LC \perp LB$, $JC \perp JA$, to prove: J , L , I three points collinear.

$$\frac{I-J}{I-L} = \left(\frac{L-O}{L-I} \frac{C-I}{C-O} \right) \left(\frac{J-I}{J-A} \frac{C-A}{C-I} \right) \left(\frac{A-J}{A-C} \frac{O-C}{O-B} \right) \frac{B-O}{L-O}$$

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