



Example 90 : As shown in Figure 3, O is the midpoint of AB , M is a point on the circle with AB as the diameter, I and J are the circumcenters of $\triangle AOM$ and $\triangle BOM$ respectively, and the proof is: $MI \perp MJ$.

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

Explanation: It can be generalized by the identity. As shown in the figure, A , B , O are collinear, M is not on AB , I , J are the circumcentres of $\triangle AOM$ and $\triangle BOM$ respectively. Prove: $\angle IMJ = \angle AMB$.