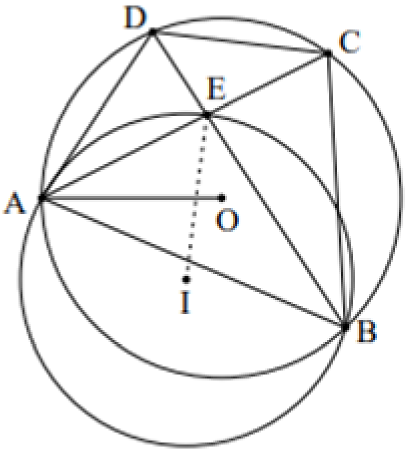
Example 96 : As shown in Figure 3, in the quadrilateral $ABCD$ *inscribed in* the circle O, the diagonals intersect at E, *and* I is the circumcenter of $\triangle ABE$. Prove: $IE \perp DC$.



$$\frac{I-E}{D-C}=\frac{B-E}{B-D}\frac{A-E}{C-A}\left(\frac{B-A}{B-E}\frac{E-I}{A-E}\right)\left(\frac{C-A}{C-D}\frac{B-D}{B-A}\right),$$

The abbreviation is $\frac{I-E}{D-C}=\left(\frac{B-A}{B-D}\frac{E-I}{C-A}\right)\left(\frac{C-A}{C-D}\frac{B-D}{B-A}\right)$, is the geometric meaning obvious?