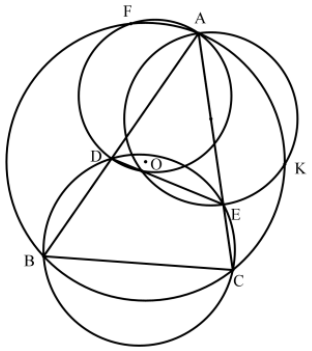
Example 197 : As shown in Figure 1 , *in* △ ABC , points *D* and *E are on* sides *AB* and *AC* respectively , so that ∠ADE = ∠ACB , the second intersection point between the circle whose diameter is *AD and AE* and the circumscribed circle of △ *ABC They are F* and *K* respectively . To prove: *D* , *E* , *K* and *F* share a circle.



$$\frac{F-K}{F-D}\frac{B-A}{D-E}\frac{K-E}{K-A}\frac{A-K}{K-C}\frac{F-A}{F-K}\\ \frac{E-K}{D-E}\frac{C-B}{C-A}\frac{F-A}{F-D}\frac{B-A}{B-C}\frac{C-A}{C-K}=1$$