Example 1 9 : As shown in Figure 1, suppose the convex hexagon $ABCDEF$, $AB=a$, $BC=b'$, $CD=c$, $DE=a'$, $EF=b$, $FA=c'$, $AD=f'$, $BE=g$, , $CF=e$ is inscribed in a circle , then $efg=aa'e+bb'f+cc'g+abc+a'b'c'$.

$$(A-B)(C-D)(E-F)+(B-C)(D-E)(A-F)+(A-B)(F-C)(E-D)$$

$$+(B-C)(A-D)(E-F)+(C-D)(B-E)(A-F)=(A-D)(B-E)(C-F)$$

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

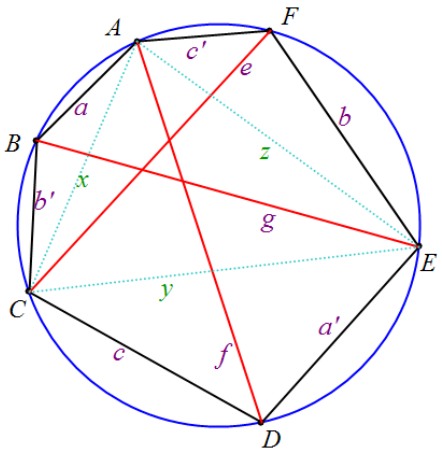

figure 2