



**Example 191 :** As shown in Figure 1 , the quadrilateral  $ABCD$  ,  $AC$  intersects  $BD$  at  $O$  ,  $M$  is a point on  $AB$  , the circumcircle of  $\triangle ACM$  intersects with the circumcircle of  $\triangle BDM$  at  $N$  , to prove:  $B, O, C, N$  four points circle; if  $MN$  intersects the circumscribed circle of  $\triangle BOC$  on  $K$  , then  $AB \parallel OK$  .

Proof: 
$$\frac{A-C}{B-D} \frac{A-M}{N-C} \frac{B-D}{N-M} \frac{B-M}{N-D} \frac{M-B}{A-M} = 1, \quad \frac{O-K}{A-B} \frac{N-M}{O-K} \frac{A-B}{N-M} = 1.$$