



**Example 77 :** As shown in Figure 3, in the quadrilateral  $ABCD$ , if the diagonals  $\angle A$  and  $\angle C$  are equal , *then* the bisectors of the *other* pair of diagonals  $\angle B$  and  $\angle D$  are parallel to each other.

$$\left( \frac{N-D}{B-M} \right)^2 = \frac{\frac{A-D}{C-B} \frac{B-A}{B-M} \frac{D-N}{D-C}}{\frac{C-D}{B-C} \frac{D-A}{D-N}}.$$

Explanation: The right part of the equation is a positive real number, so it

can be judged  $\frac{N-D}{B-M}$  as a real number.