Example 1 86 : As shown in Figure 1, quadrilateral $ABCD$, AC intersects BD at P, *and AB* intersects DC at E. Prove that the necessary and sufficient condition for the four points A, B, C, and D *to be in* a circle is the angle bisector of $\angle APD$ and $\angle AED$ parallel.

$$\left(\frac{L_2}{L_1}\right)^2 \frac{\dfrac{A-C}{A-B}}{\dfrac{D-C}{D-B}} \frac{\dfrac{L_1}{B-D}}{\dfrac{C-A}{L_1}} \frac{\dfrac{B-A}{L_2}}{\dfrac{L_2}{C-D}} = 1,$$

$$u = \pi - \angle A - \frac{\pi - \angle A - \angle D}{2} = \frac{\pi - \angle A + \angle D}{2},$$

$$v = \frac{\pi - \angle DAC - \angle BDA}{2} + \angle BDA = \frac{\pi - \angle DAC + \angle BDA}{2},$$

$$u = v \Leftrightarrow -\angle A + \angle D = -\angle DAC + \angle BDA.$$