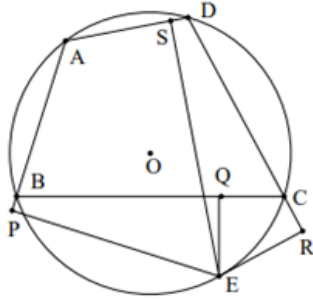


Example 152 : As shown in Figure 3, point E is on the circumscribed circle O of quadrilateral $ABCD$, and the feet of E on AB , BC , CD , and DA are P , Q , R , and S respectively. Prove: $\angle EPS = \angle EQR$.



$$\frac{Q-R}{Q-E} / \frac{P-S}{P-E} = \left(\frac{R-Q}{R-C} \frac{E-C}{E-Q} \right) \left(\frac{S-A}{S-P} \frac{E-P}{E-A} \right) \left(\frac{C-R}{A-S} \frac{E-A}{E-C} \right),$$

Explanation: This question comes from Zhou Gaozhang, but in fact, the conclusion $\angle EPS = \angle EQR$ only needs four points A , E , C , and D to be in a circle, and it has nothing to do with the position of B .