

Example 2 29: As shown in the figure, I is the center of \triangle ABC, the straight lines P 1 Q 1 and P 2 Q 2 are symmetrical about AI, the straight lines P 2 Q 2 and P 3 Q 3 are symmetrical about BI, and the straight lines P 3 Q 3 and P 4 Q 4 Symmetric about CI, verify: the symmetric straight line P 4 Q 4 about AC is parallel to P 1 Q 1.

$$\frac{A-C}{A-I} \frac{B-I}{B-C} \frac{C-B}{C-I} \frac{A-I}{P_2-Q_2} \frac{P_2-Q_2}{B-I} \frac{C-I}{P_4-Q_4} \frac{P_1-Q_1}{A-C} = 1,$$

$$\frac{A-I}{A-B} \frac{B-I}{B-I} \frac{C-B}{C-A} \frac{A-I}{A-I} \frac{P_2-Q_2}{A-I} \frac{B-I}{P_3-Q_3} \frac{P_3-Q_3}{C-I} \frac{C-A}{P_4-Q_4} = 1,$$