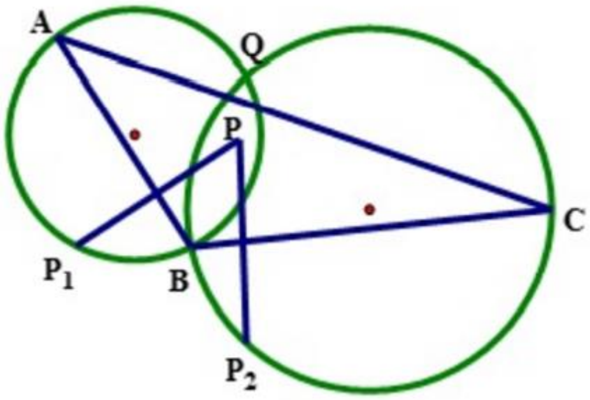

Example 1 92 : As shown in Figure 1 , point P on the $\triangle$ ABC *plane* , P , P_1 is symmetric about AB , P , is symmetric P_2 about BC , P , is symmetric P_3 about CA , prove that the circumscribed circles of $\triangle ABP_1$, $\triangle BCP_2$, $\triangle CAP_3$ intersect at one point.

Proof: Assuming that the circumscribed circle of $\triangle ABP_1$, $\triangle BCP_2$ intersects at Q , it is only necessary to prove *that* $\angle$AQC = $\angle APC$.

Proof: $\dfrac{\dfrac{Q-C}{Q-A}}{\dfrac{P-A}{P-C}}=\dfrac{\dfrac{Q-B}{Q-A}}{\dfrac{B-P_1}{P_1-A}}\dfrac{\dfrac{P-B}{P-A}}{\dfrac{P_1-A}{P_1-B}}\dfrac{\dfrac{Q-C}{Q-B}}{\dfrac{P_2-C}{B-P_2}}\dfrac{\dfrac{P-C}{P-B}}{\dfrac{P_2-B}{P_2-C}}$.