1. In the figure below, the points P, A, B lie on a circle. The point Q lies inside the circle such that $\angle PAQ = 90°$ and $PQ = BQ$. Prove that the value of $\angle AQB - \angle PQA$ is equal to the arc AB.

Example 1 65 : As shown in Figure 1, three points P, A, and B are on a circle, Q is inside the circle, and $AP \perp AQ$, $QP = QB$, prove: $\angle AQB - \angle PQA$ is equal to the central angle subtended by the arc AB. (2015 Iran Mathematics Contest Questions)

$$\left(\frac{A-P}{A-Q}\right)^2 \frac{\dfrac{B-Q}{B-P}}{\dfrac{P-B}{P-Q}} \frac{\dfrac{Q-A}{Q-B}}{\dfrac{Q-P}{Q-A}\left(\dfrac{P-A}{P-B}\right)^2} = -1$$