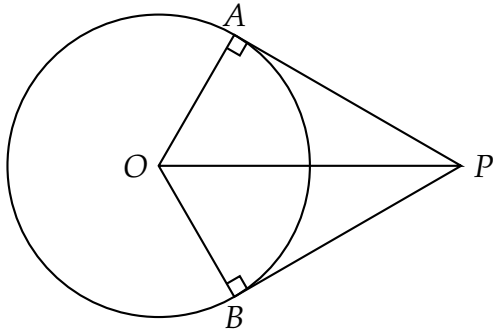


## Geometry for Elementary Teachers – Quiz 10

Provide an elementary proof of each of the following.

1.

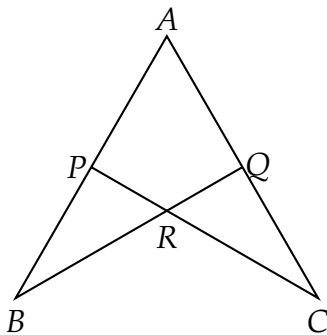


**Given:** Points  $A, B$  are on a circle with center  $O$ ,  $\overline{AP} \perp \overline{AO}$ ,  $\overline{BP} \perp \overline{BO}$

**To Prove:**  $AP = BP$ .

**Proof:**

2.

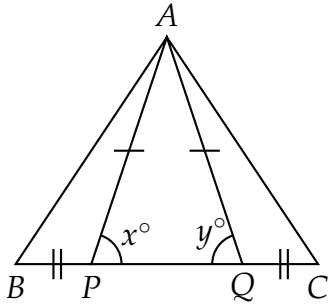


**Given:**  $AB = AC$ ,  $AP = AQ$ .

**To Prove:**  $BQ = CP$ .

**Proof:**

3.

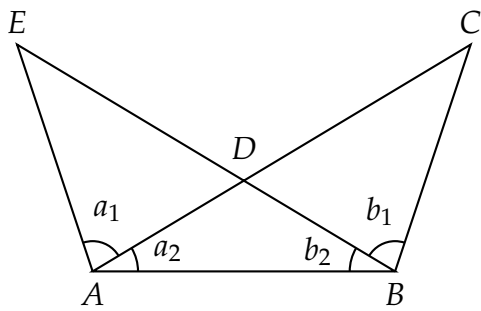


**Given:**  $BP = CQ$ ,  $AP = AQ$ ,  $x = y$ .

**To Prove:**  $AB = AC$ .

**Proof:**

4.



**Given:**  $a_1 = b_1$ ,  $a_2 = b_2$ .

**To Prove:**  $AC = BE$ .

**Proof:**