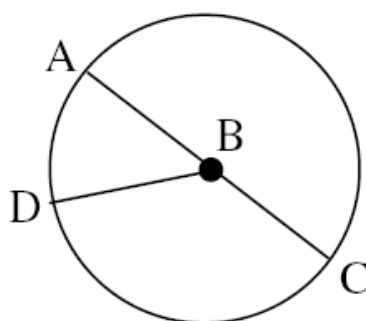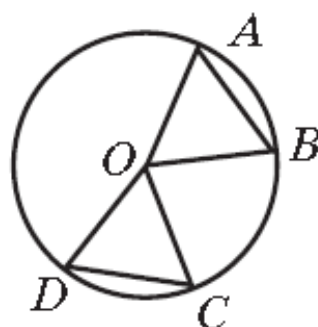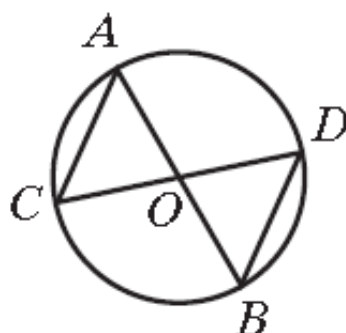**Name:** _____

Parts of a Circle

Exercise 1: In the circle with center B , AC = 9, and $m \angle ABD = 40^0$, Find the measure and the length of AD

Exercise 2: Given: Circle of center O; $AB \cong CD$ .Prove: $\triangle AOB \cong \triangle COD$

Exercise 3: Given: $\overline{AB}$ and $\overline{CD}$ intersects at O, and the endpoints of $\overline{AB}$ and $\overline{CD}$ are on circle O. Prove: $\overline{AC} \cong \overline{BD}$

Exercise 4: Points A, B, C, and D lie on circle with center O such that $\overline{AC} \perp \overline{BD}$. Prove that the quadrilateral ABCD is a square.