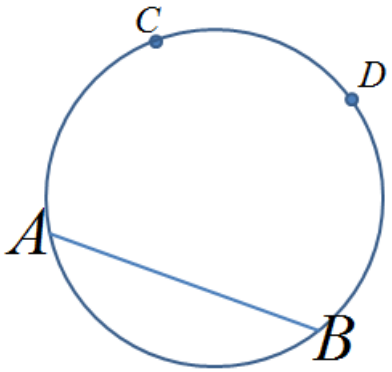
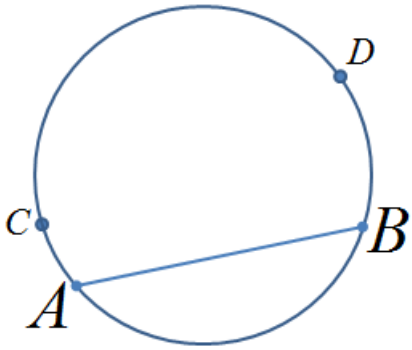
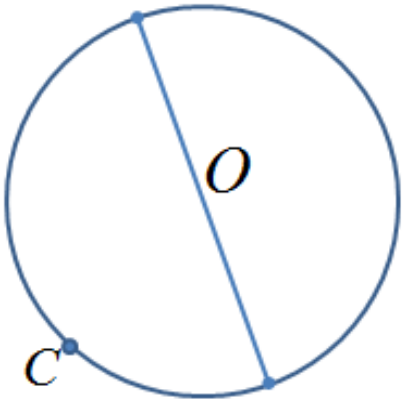
Name:_____ **HW Math 9 Section 8.3 Angles Properties in a Circle**

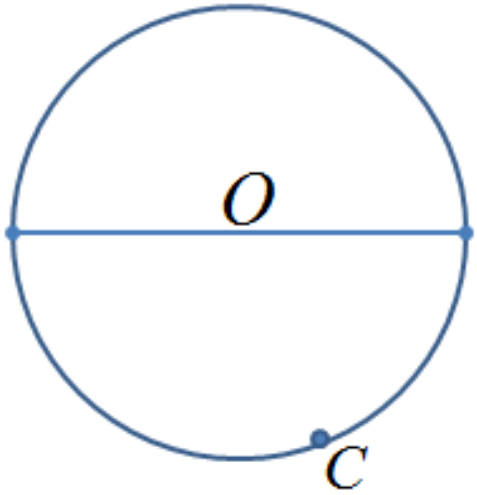
1. Given chord AB in each circle, connect points "A" and "B" to both points "C" and "D". Then measure angles $\angle ACB$ and $\angle ADB$. Are the inscribed angles equal or different?



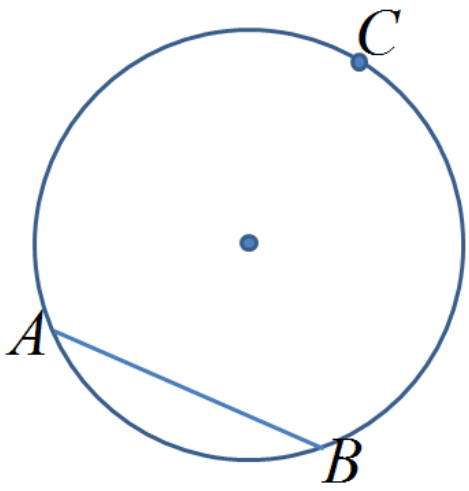


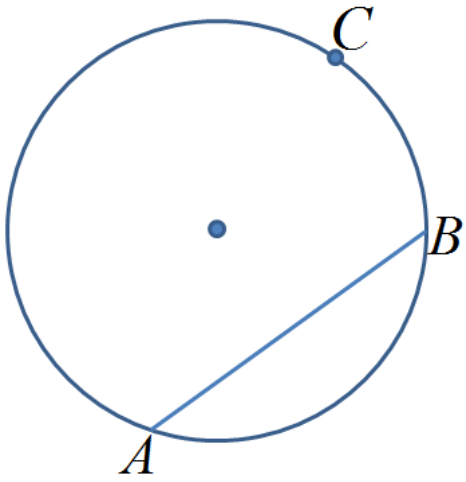
2. Connect the endpoints of the diameter to point "C". Measure the inscribed angle at point "C":



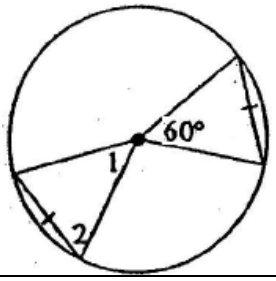
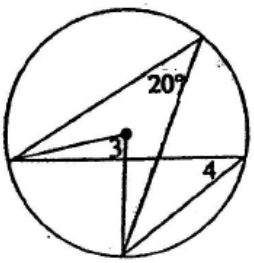
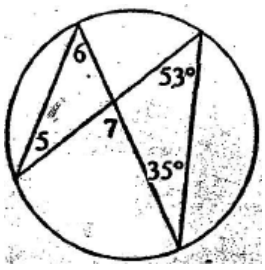
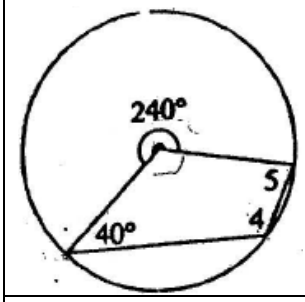
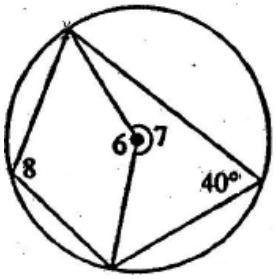
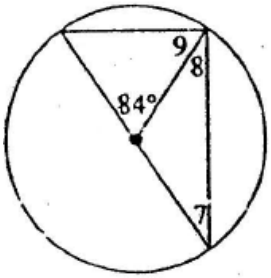
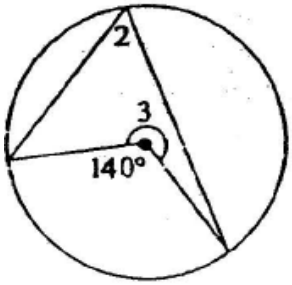
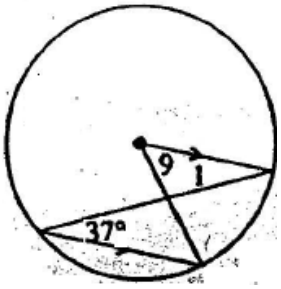
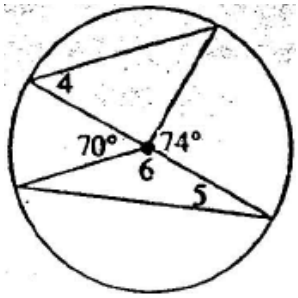
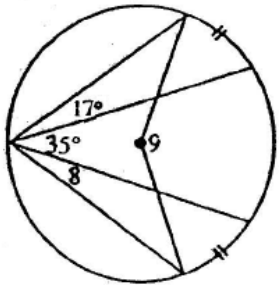
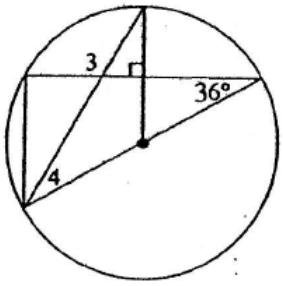
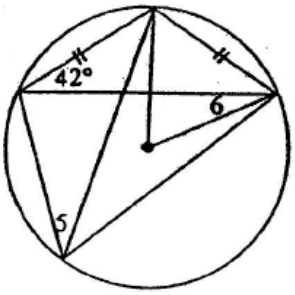


3. Given each circle and chord AB, draw a central angle and inscribed angle to point "C". Measure the central and inscribed angles. What do you notice about the central and inscribed angles?

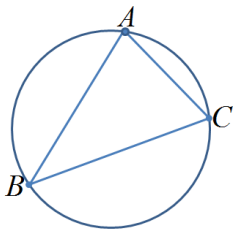
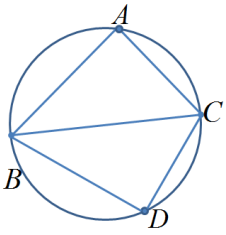
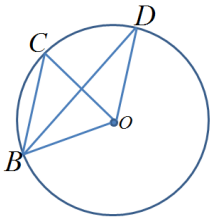
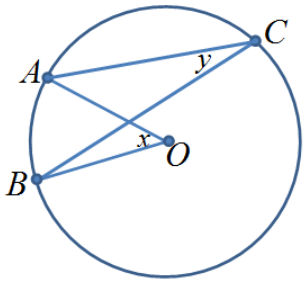
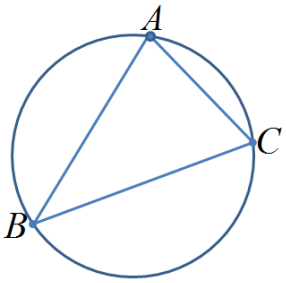
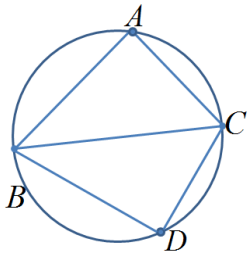




4. Find the value of the missing angles

i) $\angle 1 =$ $\angle 2 =$ 	ii) $\angle 3 =$ $\angle 4 =$ 	iii) $\angle 5 =$ $\angle 6 =$ $\angle 7 =$ 
iv) $\angle 4 =$ $\angle 5 =$ 	v) $\angle 6 =$ $\angle 7 =$ $\angle 8 =$ 	vi) $\angle 7 =$ $\angle 8 =$ $\angle 9 =$ 
vii) $\angle 2 =$ $\angle 3 =$ 	viii) $\angle 1 =$ $\angle 9 =$ 	ix) $\angle 4 =$ $\angle 5 =$ $\angle 6 =$ 
x) $\angle 8 =$ $\angle 9 =$ 	xi) $\angle 3 =$ $\angle 4 =$ 	xii) $\angle 5 =$ $\angle 6 =$ 

5. Given each statement, indicate whether if it is true or false. If False, state the reason why:

i) the inscribed angles of a chord on the same side are equal in degree	ii) the inscribed angle is double the central angle	iii) All angles inscribed by a diameter is equal to 90 degrees
iv) If Angle "A" is 90 degrees, then line BC is a diameter: 	v) Angles "A" and "D" are equal because they are both inscribed by BC 	vi) Angles BCO and BDO are equal because they are both inscribed by chord BO 
vii) Angles "x" and "y" are equal because they are both inscribed by chord AB 	viii) Angles "A", "B", and "C" are all inscribed angles 	ix) If BC is a diameter, then angles "A" and "D" add to 180 degrees 

Given the following diagram, where all the points from A to L are equally spaced along the circumference, what is the degree angle of $\angle AEH$?