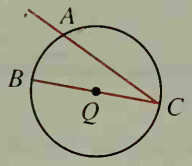
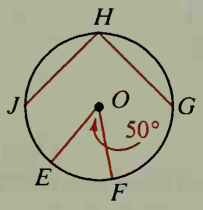
Self-Test 1



1. Points A, B, and C lie on $\odot Q$.
   a. Name two radii of $\odot Q$.
   b. Name a diameter of $\odot Q$.
   c. Name a chord and a secant of $\odot Q$.
2. Sketch each of the following.
   a. $\triangle ABC$ inscribed in $\odot O$ b. Quad. $LUMX$ circumscribed about $\odot Q$
3. $\overline{NP}$ is tangent to $\odot O$ at P. If $NO = 25$ and $NP = 20$, find OP.
4. A plane passes through the common center of two concentric spheres. Describe the intersection of the plane and the two spheres.
5. Find the length of a chord that is 3 cm from the center of a circle with radius 7 cm.
6. Points E, F, G, H, and J lie on $\odot O$.
   a. $m\overset{\frown}{EF} =$? and $m\overset{\frown}{EHF} =$?.
   b. Suppose $\overline{JH} \cong \overline{HG}$. State the theorem that supports the conclusion that $\overset{\frown}{JH} \cong \overset{\frown}{HG}$.



Angles and Segments

Objectives

1. Solve problems and prove statements involving inscribed angles.
2. Solve problems and prove statements involving angles formed by chords, secants, and tangents.
3. Solve problems involving lengths of chords, secant segments, and tangent segments.

9-5 *Inscribed Angles*

Angles 1 and 2 shown at the right are called *inscribed angles*. An **inscribed angle** is an angle whose vertex is on a circle and whose sides contain chords of the circle. We say that the angles at the right *intercept* the arcs shown in color. $\angle 1$ intercepts a minor arc. $\angle 2$ intercepts a major arc.