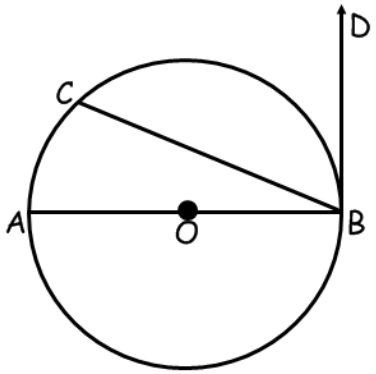
Name:_____ Date:_____ Period:_____

Circles: Angles and Arcs Practice

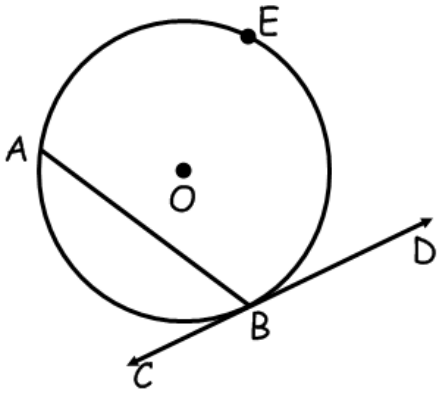
Angles and Arcs Practice

Note: None of the images are drawn to scale.

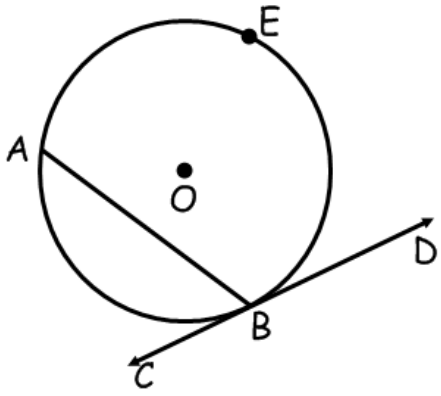
1. In the accompanying diagram, $\overline{BD}$ is tangent to circle O at B, $\overline{BC}$ is a chord and $\overline{BOA}$ is a diameter. If $m\overset{\frown}{AC} : m\overset{\frown}{CD} = 1:4$ find <DBC.



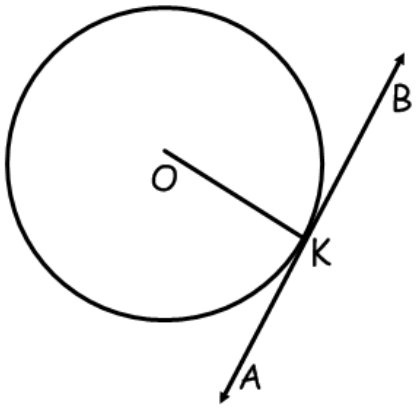
2. $\overline{AB}$ is a chord in circle O and $\overline{CD}$ is tangent at B. If $m\overset{\frown}{AB} = 100°$, find <ABC, <ABD, and $\overset{\frown}{AEB}$.



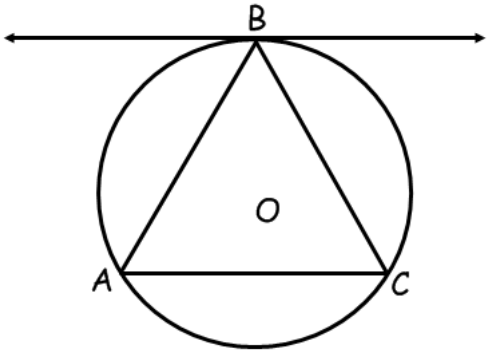
3. $\overline{AB}$ is a chord in circle O and $\overline{CD}$ is tangent at B. If m<ABC = 56º, find $\overset{\frown}{AB}$, $\overset{\frown}{AEB}$, and $< \overset{\frown}{ABD}$.



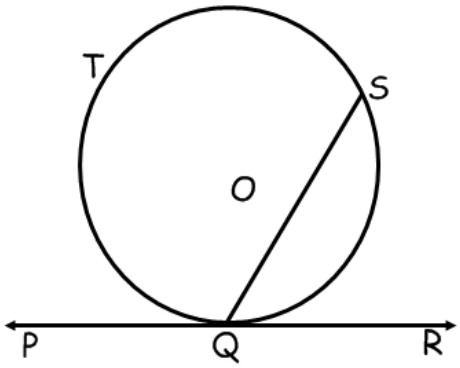
4. If $\overline{AB}$ is tangent to circle O at K, find the m<AKO.



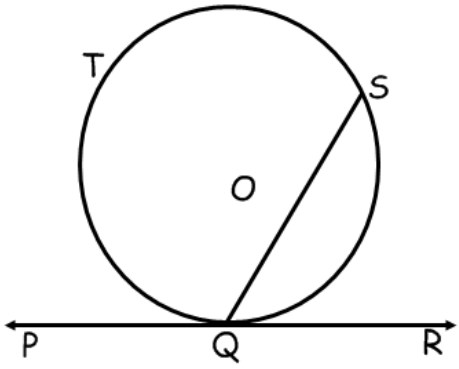
5. In the diagram below equilateral ΔABC is inscribed in circle O. Find the measure of the acute angle formed by $\overline{AB}$ and the tangent at B.



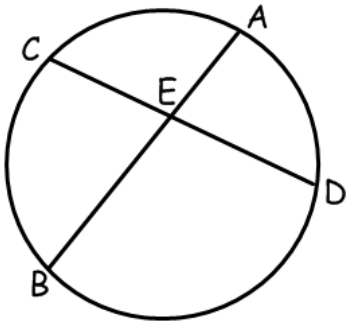
6. If $QS = 120°$, find m<SQR.



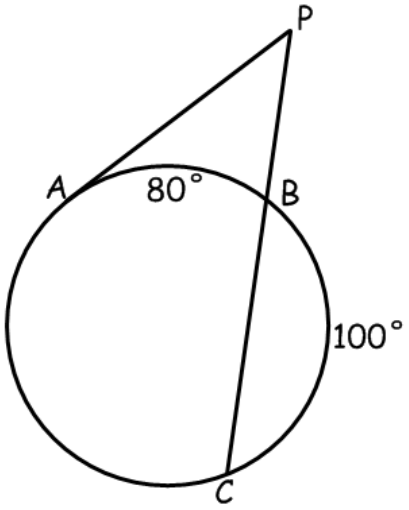
7. If m<SQR=62º. Find QTS.



8. In the accompanying diagram, chords $\overline{AB}$ and $\overline{CD}$ intersect at E. If $BC = 60°$ and $AD = 80°$, find m<AEC.

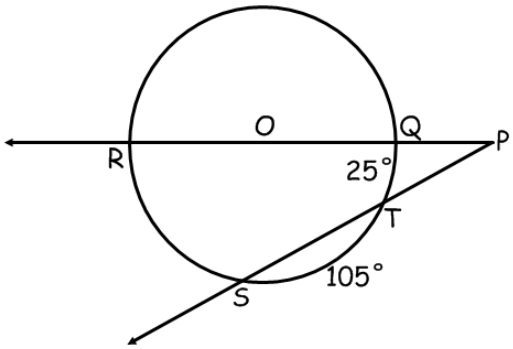


9. In the diagram below, $\overline{PA}$ is tangent to circle A and $\overline{PBC}$ is a secant. Given the information below, what is m<APB?



10. In a circle, two tangents from an external point intercept a major arc of 240º. Find The number of degrees in the angle formed by the two tangents.

11. Secants $\overline{PR}$ and $\overline{PS}$ are drawn to circle O from P in the figure below. Given the information in the diagram, what is the m<P?



12. In the diagram below, tangents $\overline{PQ}$ and $\overline{PR}$ are drawn to circle O from point P. If $QR = 145°$, find m<P.