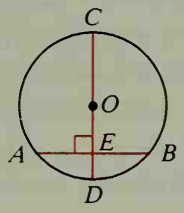
Chapter Test

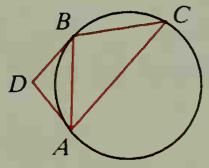
Classify each statement as true or false.

1. Opposite angles of an inscribed quadrilateral must be congruent.
2. If a chord in one circle is congruent to a chord in another circle, the arcs of these chords must have congruent central angles.
3. A diameter that is perpendicular to a chord must bisect the chord.
4. If a line bisects a chord, that line must pass through the center of the circle.
5. If $\overrightarrow{GM}$ intersects a circle in just one point, $\overline{GM}$ must be tangent to the circle.
6. It is possible to draw two circles so that no common tangents can be drawn.
7. An angle inscribed in a semicircle must be a right angle.
8. When one chord is farther from the center of a circle than another chord, the chord farther from the center is the longer of the two chords.

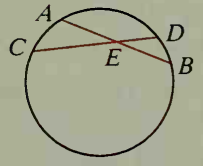


9. In $\odot O$, if $m\overset{\frown}{AB} = 100$, then $m\overset{\frown}{AC} =$ ___?___.
10. If the radius of $\odot O$ is 17 and $AB = 30$, then $OE =$ ___?___.

$\overline{DA}$ and $\overline{DB}$ are tangent to the circle.

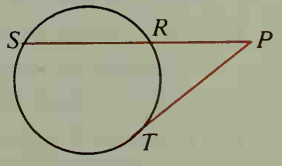


11. If $\overline{AB} \cong \overline{BC}$ and $m\overset{\frown}{BC} = 80$, then $m\angle ABC =$ ___?___.
12. If $m\angle D = 110$, then $m\angle BCA =$ ___?___.
13. Given: $m\overset{\frown}{BC} = m\overset{\frown}{AB}$
    Prove: $\overline{AC} \parallel \overline{DB}$



14. If $m\overset{\frown}{AC} = 40$ and $m\overset{\frown}{BD} = 28$, then $m\angle AEC =$ ___?___.
15. If $AE = 10$, $EB = 9$, and $CE = 15$, then $ED =$ ___?___.

$\overline{PT}$ is tangent to the circle.



16. If $m\overset{\frown}{RS} = 120$ and $m\overset{\frown}{ST} = 160$, then $m\angle P =$ ___?___.
17. If $PT = 12$ and $PS = 18$, then $PR =$ ___?___.

18. Given: $\square ABCD$ is inscribed in a circle.
    Prove: $ABCD$ is a rectangle.