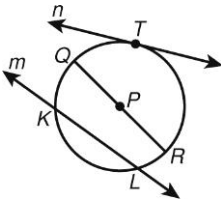


Geometry
Chapter 12 Study Guide

Name _____

1. Identify each of the following



- a. two chords: _____
- b. a secant: _____
- c. a tangent: _____
- d. a diameter: _____
- e. a radius: _____

2. Draw a second (smaller) circle so that the circles are:

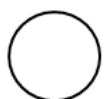
a) Concentric



b) Internally tangent

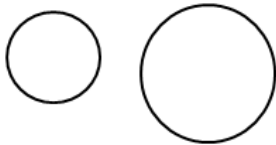


c) Externally tangent

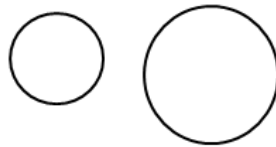


3. Draw two ...

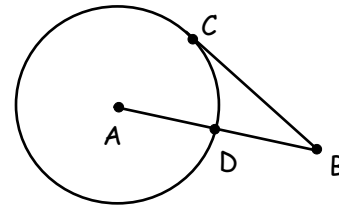
a) Common external tangents



b) Common internal tangents

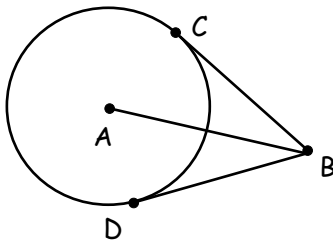


4. If \overline{BC} is tangent to $\odot A$ at C , $AD = 16$ and $BC = 30$, find BD .

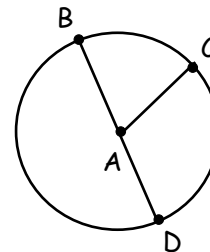


5. Given: $\odot A$ with tangents BC and BD
 $AB = 6x - 5$, $BC = 5x - 1$,
 and $BD = 3x + 9$.

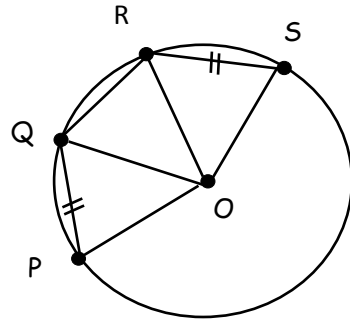
Find the radius of the circle.



6. Given $\odot A$ and $CD = 100^\circ$, find
 $m\angle CAB$ _____
 major arc BDC _____

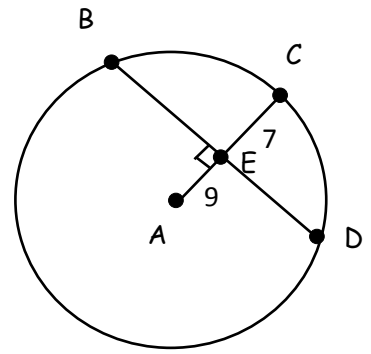


7. Given: $\odot O$
 $\overline{PQ} \cong \overline{RS}$
 $m\widehat{PQ} = (6k+10)^\circ$
 $m\widehat{QR} = (7k-1)^\circ$
 $m\widehat{RS} = (8k-4)^\circ$



Find: $m\angle ROQ$

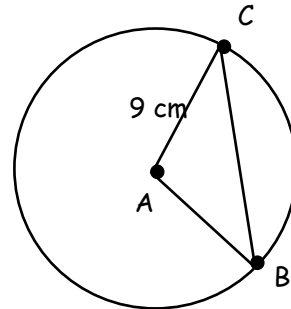
8. Given: $\odot A$
 $\overline{AC} \perp \overline{BD}$
 $AE = 9$
 $EC = 7$



Find: BD

9. A chord of length 48 inches is drawn in a circle of radius 26 inches. How far is the chord from the center of the circle?

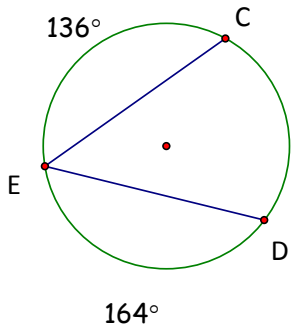
10. If $\odot A$ has a radius of 9 cm and $m\angle BAC = 120^\circ$, find ...
 A) the area of sector CAB _____
 B) the length of arc BC _____
 C) the area of segment CAB _____



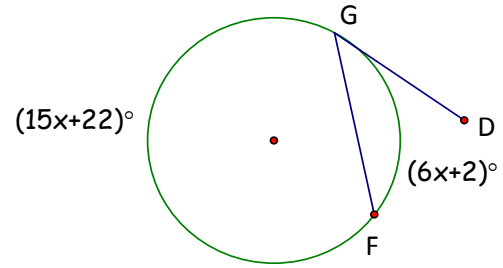
11. Central angle $\angle RTS$ is drawn in circle T of radius 6 inches. If the area of sector RTS is 8π in², what is $m\angle RTS$?

12. A central angle of 72° intercepts an arc of length 10π inches. What is the radius of the circle?

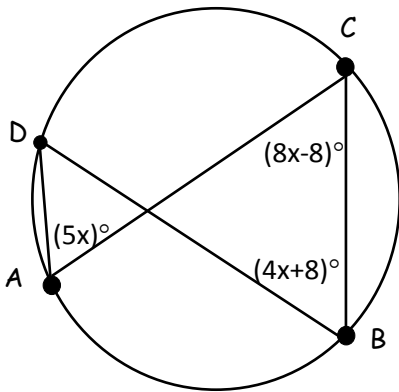
13. Find the measure of $\angle CED$



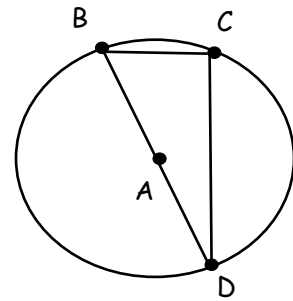
14. Find the measure of $\angle DGF$



15. Find the measure of $\angle ACB$ and DC



16. In $\odot A$ as shown, if $BC = 4$ and $AD = 5$, find CD .



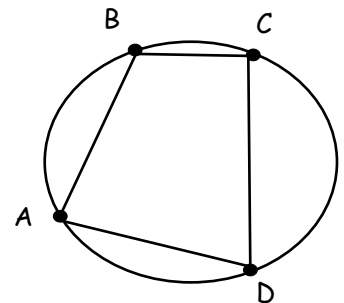
17. In quadrilateral $ABCD$ shown at right,

$$m\angle A = 4z + 8$$

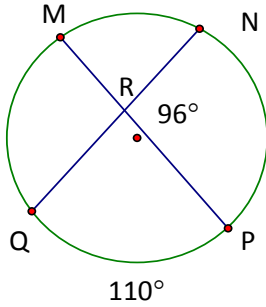
$$m\angle B = \frac{13z}{2}$$

$$m\angle D = 3z - 10$$

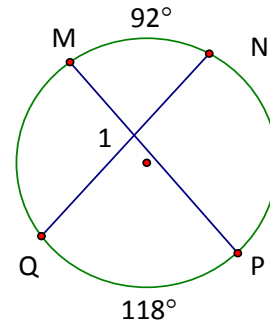
Find $m\angle C$.



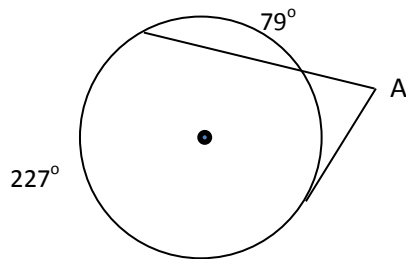
18. Find $m\widehat{MN}$ if $m\widehat{QP} = 110^\circ$ and $m\angle NRP = 96^\circ$



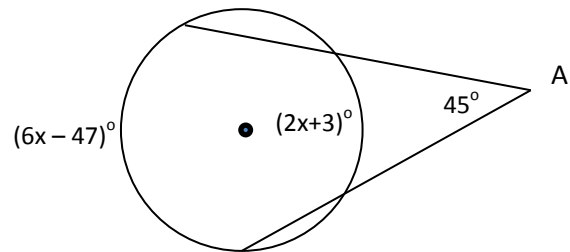
19. Find $m\angle 1$ if $m\widehat{MN} = 92^\circ$ and $m\widehat{PQ} = 118^\circ$.



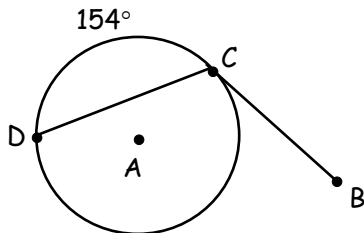
20. Find $m\angle A$ given the arc measures as shown.



21. Find the value of x .



22. If \overline{BC} is tangent to $\odot A$ at C , and $m\widehat{CD} = 154^\circ$ find $m\angle BCD$.



23. Write the equation of a circle with a center at $(7, -5)$ and a radius of 8.

24. Find the center and radius of the circle $(x+2)^2 + (y+11)^2 = 50$

25. Find the equation of the circle having $(-4, 2)$ and $(2, 10)$ as endpoints of a diameter.

26. Complete the square to write the equation of the circle in standard form, then identify the center and radius of the circle: $x^2 + y^2 + 12x - 8y + 3 = 0$