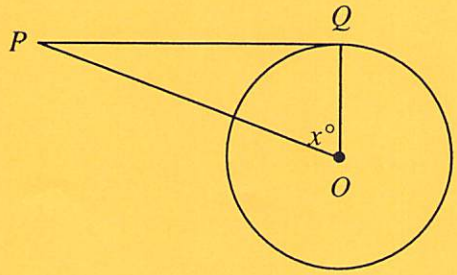
Name: _____ Date: _____

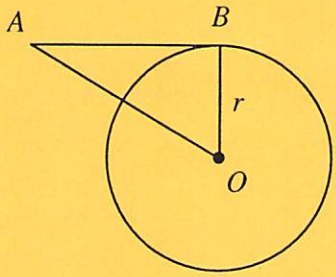
Geometry // Mr. Burke

Chapter 12: Circles
Extra Practice

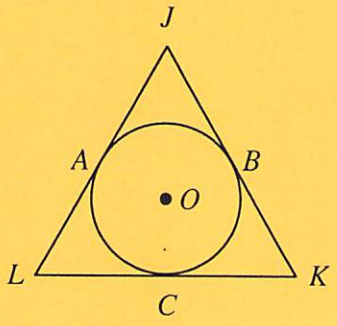
1. Given that $\overline{PQ}$ is tangent to circle O, and the $m\angle P = 20°$, solve for x.



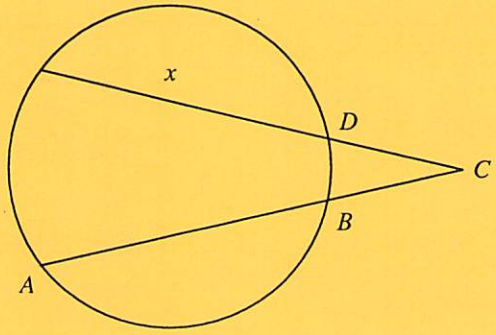
2. $\overline{AB}$ is tangent to circle O at B. If $AB = 9$ and $AO = 10.4$, find the length of radius r to the nearest tenth. *(The figure is not drawn to scale.)*



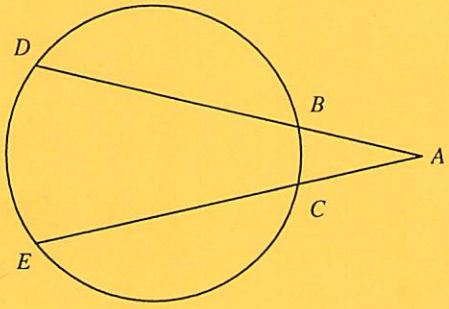
3. $\overline{JK}, \overline{KL}$ and $\overline{LJ}$ are all tangent to O. $JA = 15$, $AL = 9$, and $CK = 8$. Find the perimeter of $\triangle JKL$. *(The figure is not drawn to scale.)*



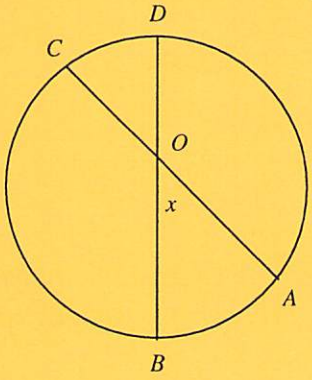
4. Solve for x: $AB = 19$, $BC = 7$, and $CD = 5$.



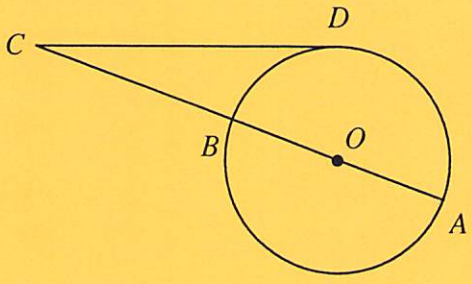
5. If $m\overset{\frown}{DE} = 109°$ and $m\overset{\frown}{BC} = 49°$. Find $m\angle A$. (*The figure is not drawn to scale.*)



6. Find the value of x if $m\overset{\frown}{AB} = 43°$ and $m\overset{\frown}{CD} = 24°$. (*The figure is not drawn to scale.*)

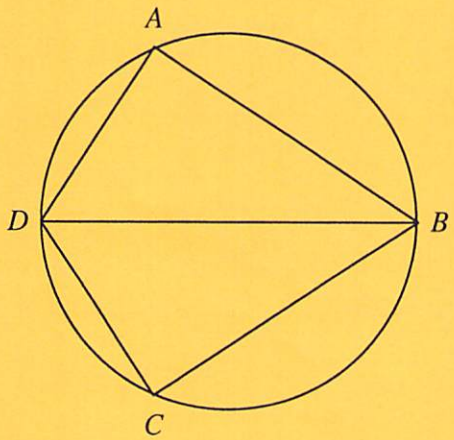


7. Find the diameter, to the nearest tenth, of the circle if $BC = 14$ and $DC = 25$. (*The figure is not drawn to scale.*)

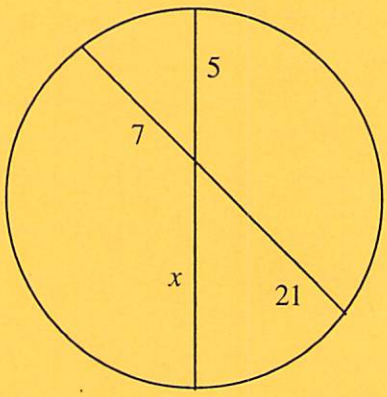


8. Write the equation of a circle whose diameter has endpoints $A(-4, -2)$ and $B(8, 6)$

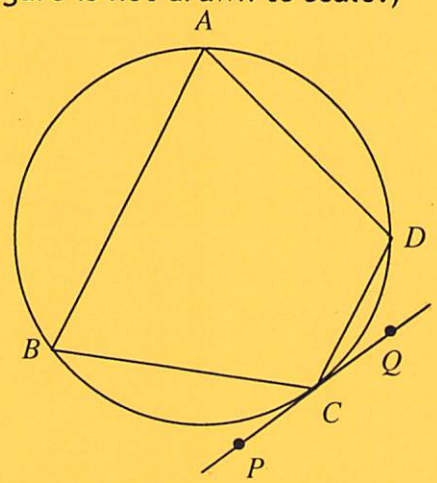
9. Given that $\angle DAB$ and $\angle DCB$ are right angles, $\overline{CD} \cong \overline{AD}$ and $m\angle BDC = 35°$, what is $m\overset{\frown}{CDA}$? (*The figure is not drawn to scale.*)



10. Solve for x.



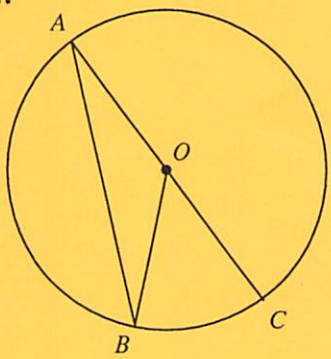
11. In the circle, $m\overset{\frown}{AD} = 94°$ and $m\angle D = 76°$. (*The figure is not drawn to scale.*)



a) Find $m\overset{\frown}{CD}$.

b) Find $m\angle DCQ$.

12. Given circle *O* with diameter $\overline{AC}$, if $m\overset{\frown}{BC} : m\overset{\frown}{AB} = 1:4$, find:

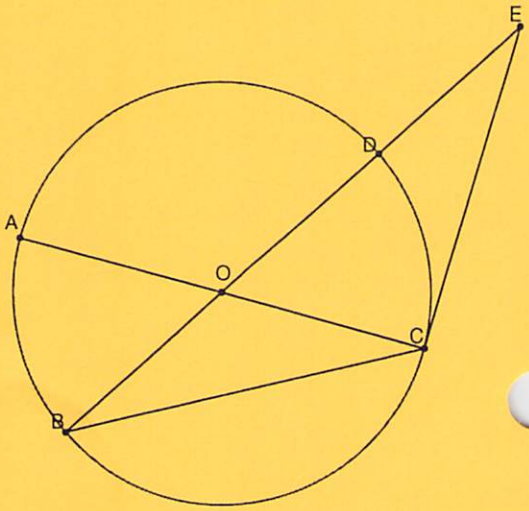


a. $m\overset{\frown}{AB}$ = _____

b. $m\angle AOB$ = _____

c. $m\angle CAB$ = _____

13. $\overline{AC}$ is a diameter of circle *O*. Segment $\overline{BODE}$ is a secant, and $\overline{EC}$ is a tangent. Chord $\overline{BC}$ is drawn. If $m\overset{\frown}{AB} : m\overset{\frown}{BC} : m\overset{\frown}{CD} = 1:2:1$, and $m\overset{\frown}{DA} = 120°$, find:



a. $m\overset{\frown}{BC}$ = _____

b. $m\angle BOC$ = _____

c. $m\angle BEC$ = _____

d. $m\angle ACE$ = _____

e. $m\angle DBC$ = _____