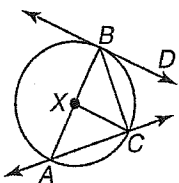## Unit 11: Circles Test Review 2017 Schmidt

1. **Use the figure.**

Name the circle.

Name a radius of the circle.

Name the diameter of the circle.

Name a chord.

Name a tangent.

Name a secant.

2. Find the exact circumference and area given that:
   A. radius= 4cm   B. diameter= 12in

3. The wheels on Elliot's truck each have a circumference of 22π inches. Determine the radius of each wheel.Determine the area of the wheel.

4. The diameter of a circular swimming pool is 15 feet. Find the exact circumference and area.

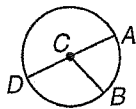5. Given that the circumference is 20π km, find the exact area.

6. Find the exact circumference of the circle.

4 cm

3 cm
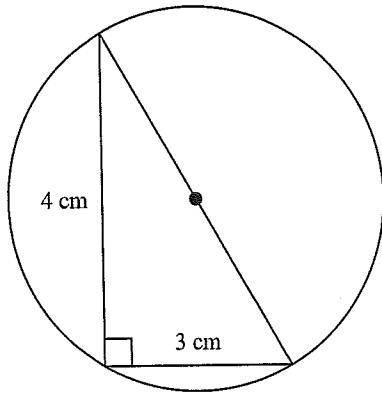
7. Find the exact circumference of the circle.

12 mm
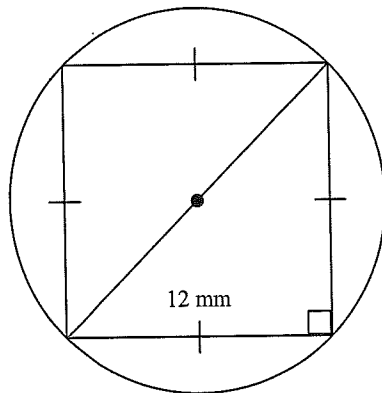
8. In $\odot C$, $m\overset{\frown}{AB} = 72$. Assume all lines which appear to be diameters are actual diameters.
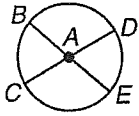

Find:

m<ACD=_____

m<BCD=_____

$m\overset{\frown}{BD}=$_____

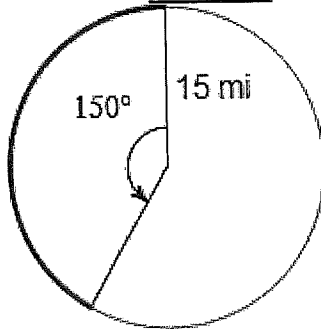$m\overset{\frown}{ABD}=$_____

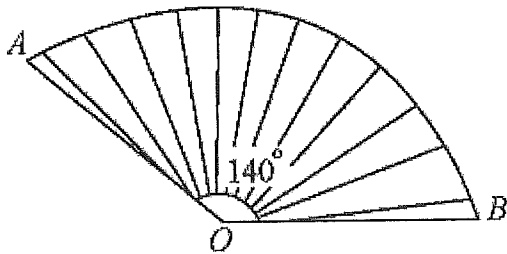9. In $\odot A$, $m\angle BAD = 110$. Find $m\overset{\frown}{DE}$.
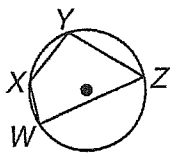

10. Find the exact **LENGTH** of *the arc.*
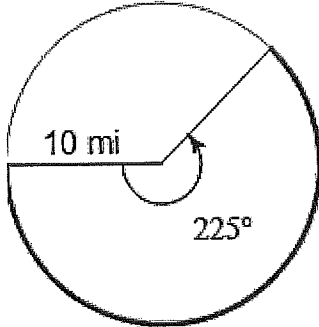
11. Find the exact **LENGTH** of *the arc.*

12. The figure represents a Japanese fan of 32 cm radius. Find the length of the $\overset{\frown}{AB}$. Round to the nearest hundredth. Keep in terms of pi.
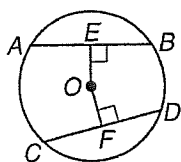
13. If $m\angle X = 126$ and m<W= 57, find:

m< Z=_____

m<Y=_____

$m\overarc{WXY} =$_____

$m\overarc{WZY} =$_____

14. In $\odot O$, $AB = 12$ centimeters, $OE = 4$ centimeters, $OF = 4$ centimeters, and $m\overarc{CD} = 123°$. Find CF. Find the radius. Find $m\overarc{AB}$

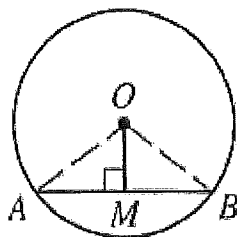CF=_____
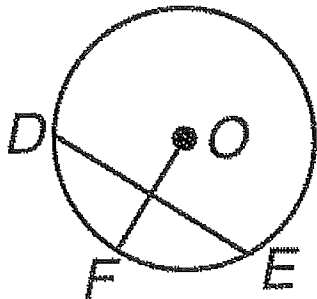
radius=_____

$m\overarc{AB}=$_____

15. In $\odot O$, $AM = -2x + 37$ and MB = 6x + 5. Find x.

16. If $DE = 12$ inches, OF $= 10$ inches, and $\overline{OF}$ is perpendicular to $\overline{DE}$

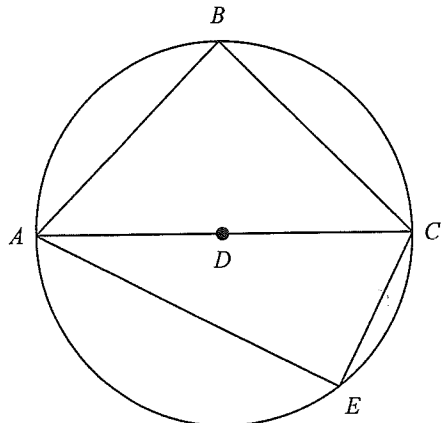A. Find the distance from the center to the chord and the distance from the chord to Point F.
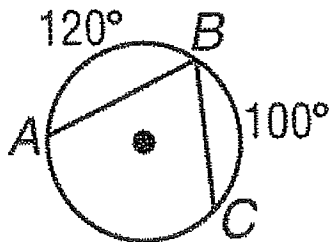
B. If m$\overparen{DF}$=63°, what is m$\overparen{FE}$?

17. Chords $\overline{XY}$ and $\overline{WV}$ are equidistant from the center of $\odot O$. If $XY = 2x + 30$ and $WV = 5x - 12$, find x.

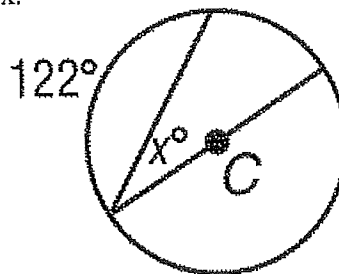18. Find the radius of a circle if a 48-meter chord is 7 meters from the center. Draw it!

19. In ⊙D, $\overline{AB} \cong \overline{CB}$ and m arc $CE = 50$. Find $m\angle BCE$.

20. a.) Find $m\angle ABC$.
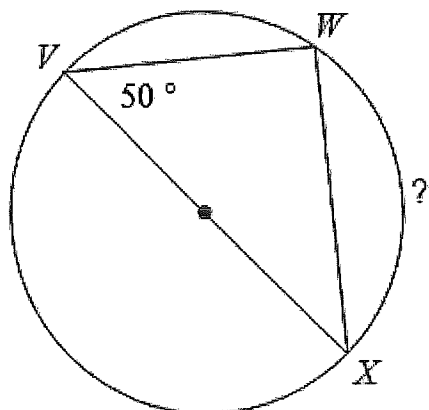
    b.) Find x.
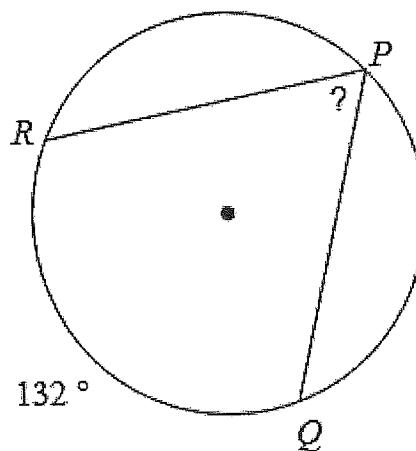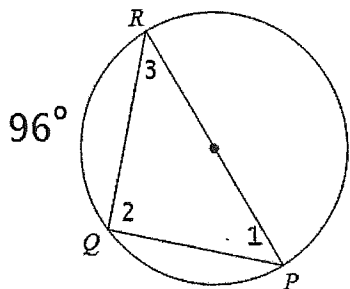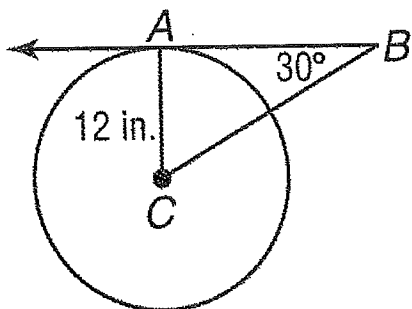
    c.) Find $m\overarc{WX}$,

    d.) Find $m\angle RPQ$.

6

21. Find the measure of each angle. $m\angle 1 =$ _____ $m\angle 2 =$ _____ $m\angle 3 =$ _____

22. If $\overline{AB}$ is tangent to $\odot C$ at A, find BC and AB. *(Use exact values)*
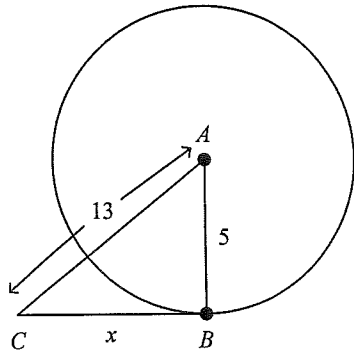

BC= _____   AB = _____

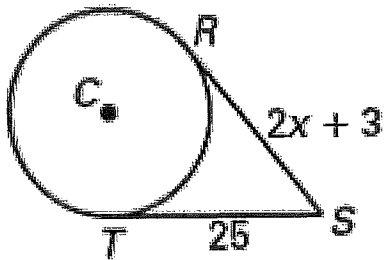23. a) If $\overline{MN}$, $\overline{NO}$, and $\overline{MO}$ are tangent to $\odot P$, find x.
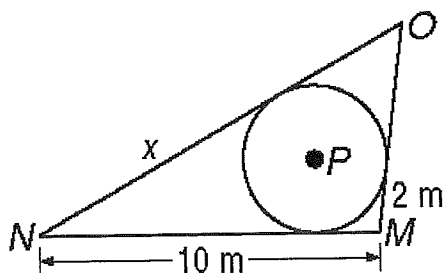
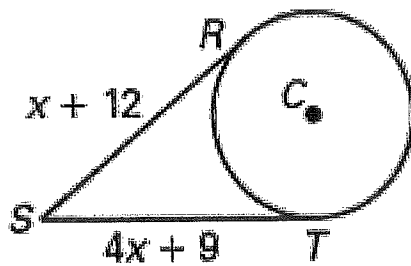b) $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, and $\overline{SP}$ are tangent to $\odot X$. Find RS.
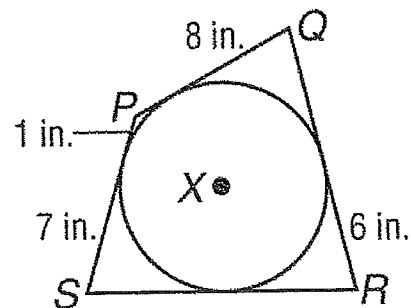
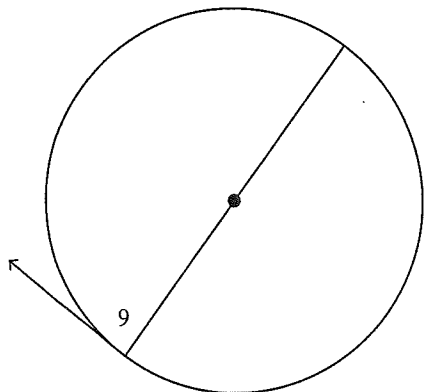24. If x is 12, is BC tangent to the circle? Explain your answer.
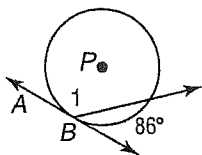

25. Find x.

26. Find x.

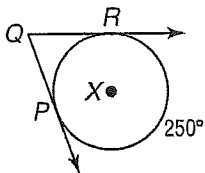*Find the measure of the numbered angle.*

27.

_____ 28. If $\overleftrightarrow{AB}$ is tangent to $\odot P$ at B, find $m\angle 1$.
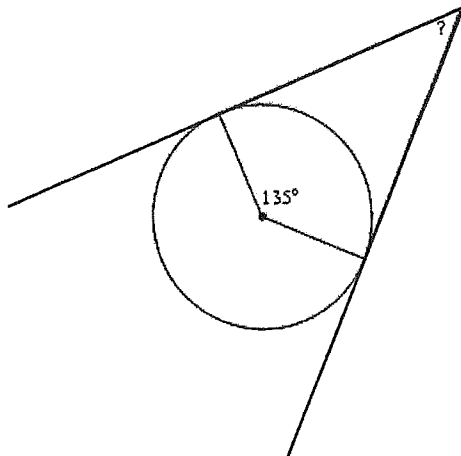

a. 43
b. 86

c. 137
d. 274

_____ 29. Find $m\angle PQR$ if $\overrightarrow{QP}$ and $\overrightarrow{QR}$ are tangent to $\odot X$.
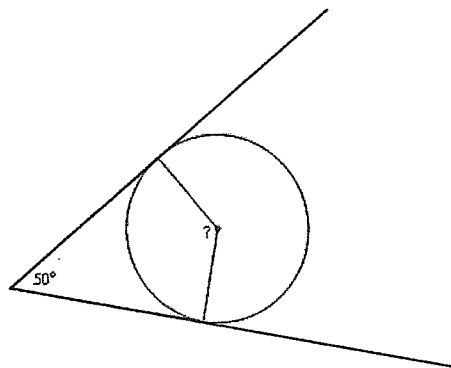

a. 70
b. 110

c. 125
d. 140

30. Find the missing angles. Assume the lines that appear to be tangent are tangent.
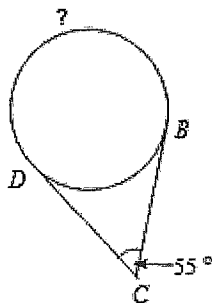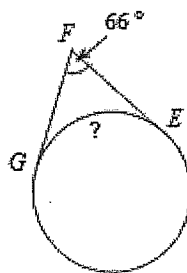
a)

135°

b)

50°

?

c.)

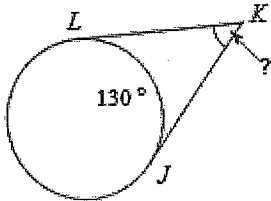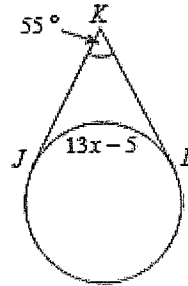?

B

D

55°

C

d.)

F 66°

E

G

?

e.)

f.) Find x.

55° K

L K

?

130°

J

$13x-5$

J

L

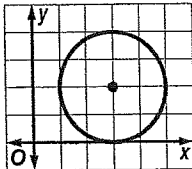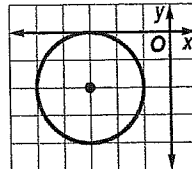_____ 31. Find the radius of the circle whose equation is $(x+3)^2 + (y-7)^2 = 289$.
a. 7
c. 34
b. 17
d. 289

_____ 32. Find the center of the circle whose equation is $(x+11)^2 + (y-7)^2 = 121$.
a. $(-11, 7)$
c. $(121, 49)$
b. $(11, -7)$
d. 11

_____ 33. Find the equation of a circle with center $(0, 0)$ and radius 4.
a. $x^2 + y^2 = 4$.
c. $(x-4)^2 + (y-4)^2 = 16$
b. $x^2 + y^2 = 16$.
d. $4x + 4y = 16$

_____ 34. Find the equation of a circle whose center is at $(2, 3)$ and radius is 6.
a. $(x+2)^2 + (y+3)^2 = 6$.
c. $(x+2)^2 + (y+3)^2 = 36$
b. $(x-2)^2 + (y-3)^2 = 6$.
d. $(x-2)^2 + (y-3)^2 = 36$
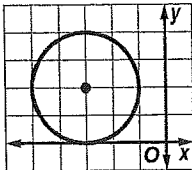
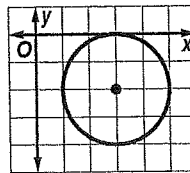_____ 35. Identify the graph of $(x-3)^2 + (y+2)^2 = 4$.

a.

c.
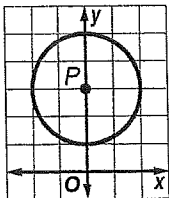
b.

d.

_____ 36. Find the equation of $\odot P$.
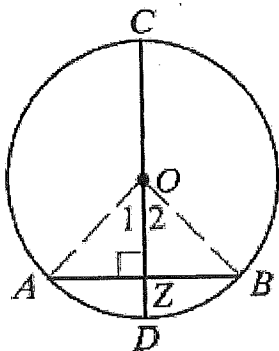

a. $x^2 + (y-3)^2 = 4$.

b. $x^2 + (y-3)^2 = 2$.

c. $(x-3)^2 + y^2 = 2$

d. $(x-3)^2 + y^2 = 4$

37. Write the equation of a circle whose diameter has endpoints (2,7) and (-6,15).

38. Write the equation of a circle with the center at (-2,1) and a radius with the endpoint (1,0).

39. If the radius of circle O is 5m and OZ = 3m, find the following measures.

ZD = _____   AZ = _____

$m\overset{\frown}{AD}$ = _____ $m\overset{\frown}{BA}$ = _____