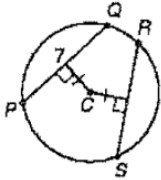Chords   Name _____

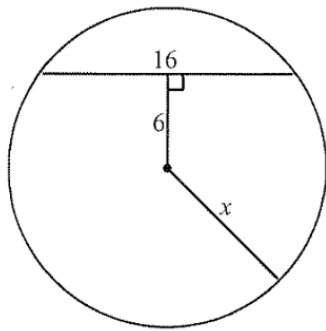Geometry   Date _____ Per_____

1.   Find RS in $\odot C$. Explain your reasoning.

2.   Find the value of x to the nearest tenth.

3. Suppose a chord of a circle is 18 inches long and is 12 inches from the center of the circle. Find the length of the radius.

4. Suppose the diameter of a circle is 26 feet long and a chord is 10 feet long. Find the distance from the center of the circle to the chord.

5. The designer wheel cover shown at the right has diameter 12 inches. The wires (chords) that are shown are all equal length.

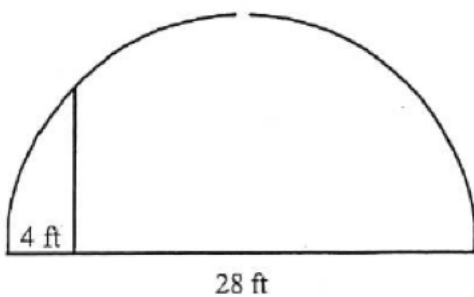a. What is the length of each of the wire chords?
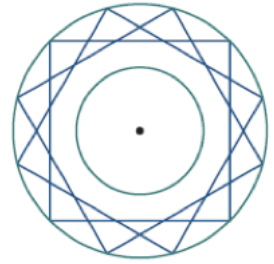
b. More wire chords can be added to the design, but none can come closer than 3 inches to the
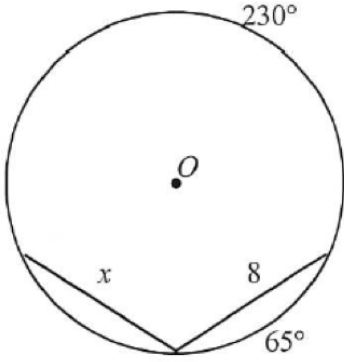   center of the wheel cover.

   i. What is the longest possible chord that can be added to this design?

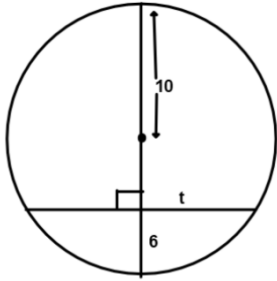   ii. What is the measure of the central angle of one of those longest wire chords?

6. Inside a semicircular tunnel of diameter 28 feet, a vertical support beam is placed 4 feet from the side of the tunnel. How tall is the beam?

4 ft
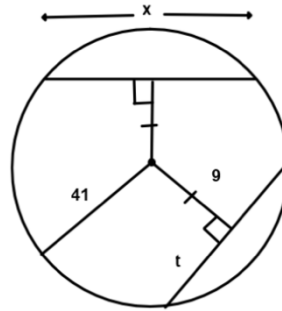
28 ft

7. Find the value of x to the nearest tenth.

230°

O

x   8

65°

8. Not drawn to scale

10

t

6

t=_____

9.

x

41   9

t

t = _____

x= _____

10.

D
A

2x + 3

8x
K

C

B

X = _____

11.

S

x°

R   T
64°
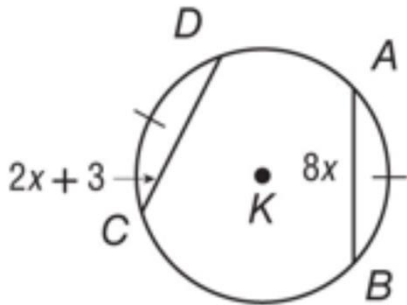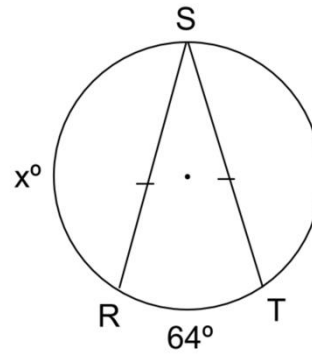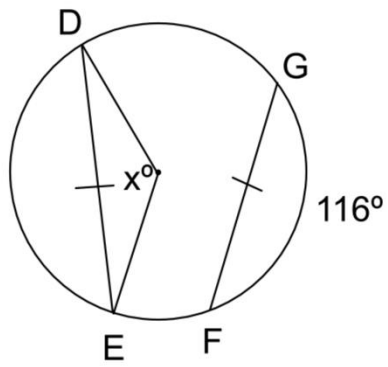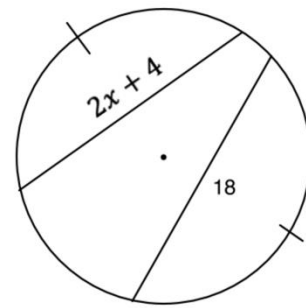
X = _____

Find the value of x in each problem.

12.

13.
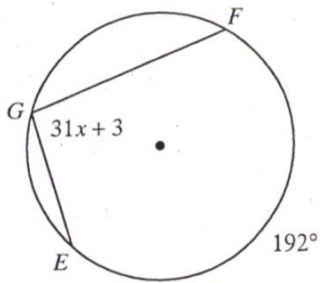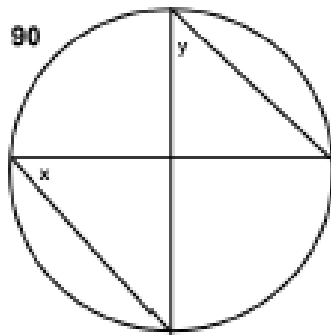

14.

Solve for x.

28.

$31x + 3$

$192°$

F
G
E
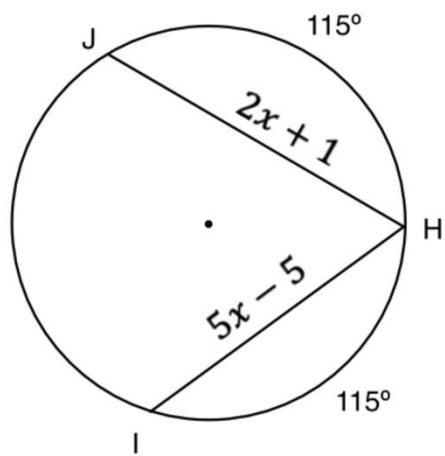
Assume that segments that look like diameters are diameters

29.

90
y
x

x= _____

y= _____

30.

115

x

40

z

x= _____

y = _____

z= _____
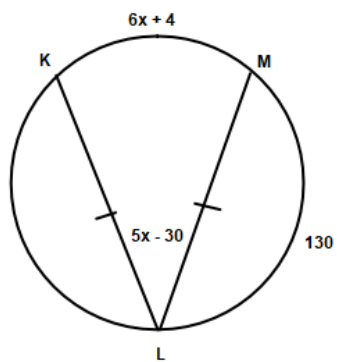
31.

z

120

x

95

y

100

x=_____

y=_____

z=_____

32.

6x + 4

K   M

5x - 30   130

L

X = _____

m<L _____

mKM _____

33.

Q

4x + 20

R

5x + 24   3x + 16

P

$x =$ _____

$m\widehat{PQ} =$ _____

$m\widehat{QR} =$ _____

$m\widehat{PR} =$ _____