Geometry

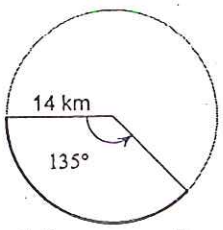
Name _____

Chapter 12 Test Review

Date _____ Period ____

Find the length of each arc. $\frac{m}{360} 2\pi r$

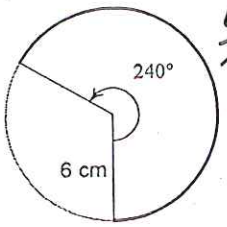
1)



$\frac{135}{360} 2\pi(14)$

10.5π km

2)

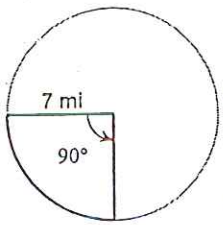


$\frac{240}{300} 2\pi(6)$

8π cm

Find the area of each sector. $\frac{m}{360}\pi r^2$

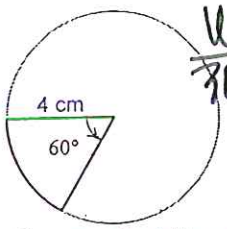
3)



$\left(\frac{90}{360}\right)\pi 7^2$

12.25π mi^2

4)

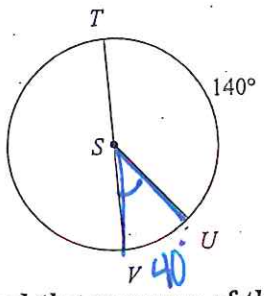


$\frac{60}{360}\pi 4^2$

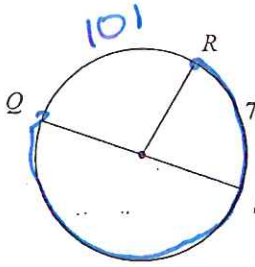
2.6π cm^2

Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

5) $m\angle USV$ $= 40°$

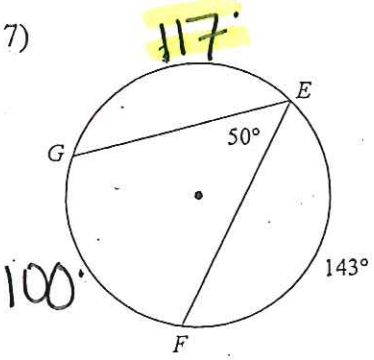


6) $m\widehat{RSQ}$ $= 259°$

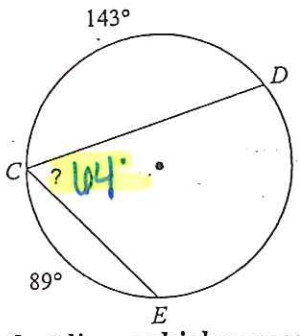


Find the measure of the arc or angle indicated.

7)

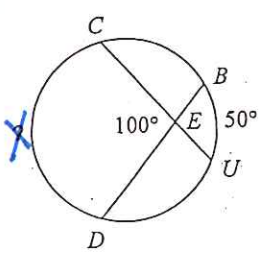


8)



Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

9)



$A = \frac{1}{2}(A_1 + A_2)$

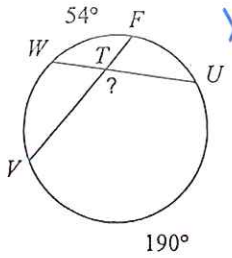
$100 = \frac{1}{2}(50 + x)$ $\times 2$

$200 = 50 + x$

$x = 150$

$X = \frac{1}{2}(54 + 190)$

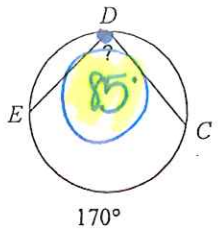
10)



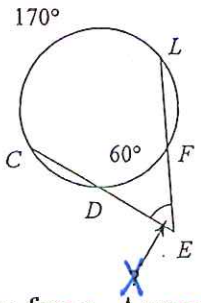
$X = \frac{1}{2}(244)$

$X = 122$

11)



12)



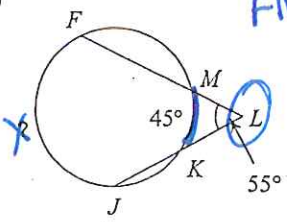
$X = \frac{1}{2}(170 - 60)$

$X = \frac{1}{2}(110)$

$X = 55$

13)

Ang = ½ (Big − Small)



$55 = \frac{1}{2}(x - 45)$

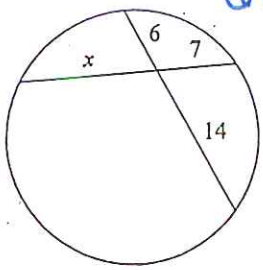
$110 = x - 45$

$x = 155$

Solve for x. Assume that lines which appear tangent are tangent.

Secant-tangent

14)

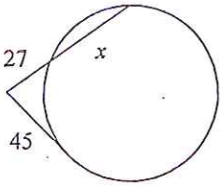


$6(14) = 7x$

$84 = 7x$

$x = 12$

15)



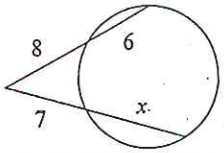
$(x + 27)27 = (45)^2$

$27x + 729 = 2025$

$27x = 1296$

$x = 48$

16)



Sec-sec

$14(8) = (7 + x)7$

$112 = 49 + 7x$

$63 = 7x$

$x = 9$

Use the information provided to write the equation of each circle.

17) Center: (8, −7)
Radius: 6

h k

$6^2 = (x - 8)^2 + (y + 7)^2$

$36 = (x - 8)^2 + (y + 7)^2$

18) Center: (16, 10)
Point on Circle: (13, 10)

h k

x y

$r^2 = (13 - 16)^2 + (10 - 10)^2$

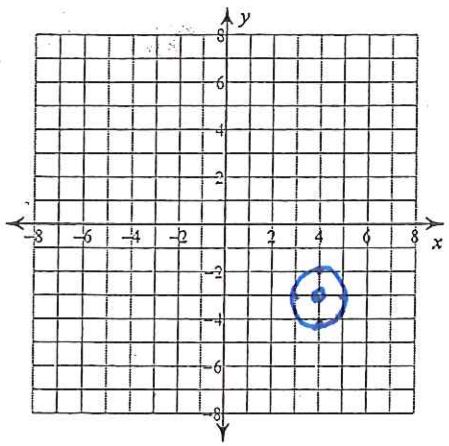
$r^2 = (-3)^2 + (0)^2$

$r^2 = 9$

$r = 3$

Identify the center and radius of each. Then sketch the graph.

19) $(x - 4)^2 + (y + 3)^2 = 1$



Center (4, −3)

$r = 1$

$r^2 = 1$