

Circles Test review

Name \_\_\_\_\_

Find the length of each arc. Answer in terms of pi

1)  $r = 12 \text{ km}, \theta = 240^\circ$

$16\pi \text{ km}$

2)  $r = 10 \text{ km}, \theta = 300^\circ$

$\frac{50\pi}{3} \text{ km}$

Find the area of each sector. Answer in terms of pi

3)  $r = 10 \text{ in}, \theta = 60^\circ$

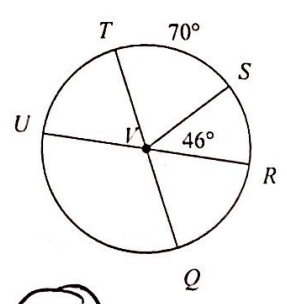
$\frac{50\pi}{3} \text{ in}^2$

4)  $r = 5 \text{ km}, \theta = 195^\circ$

$\frac{325\pi}{24} \text{ km}^2$

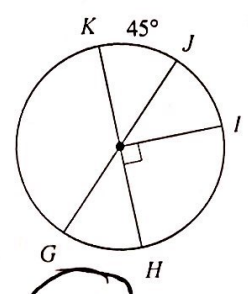
Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

5)  $m\angle RVQ$



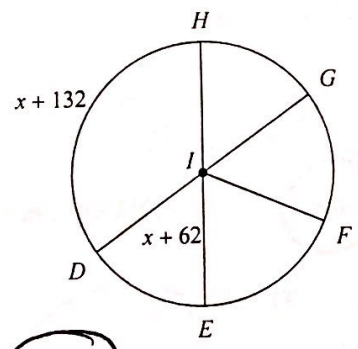
$64^\circ$

6)  $m\widehat{IGJ}$



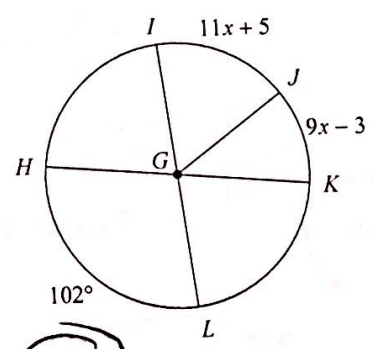
$315^\circ$

7)  $m\angle EID$



$55^\circ$

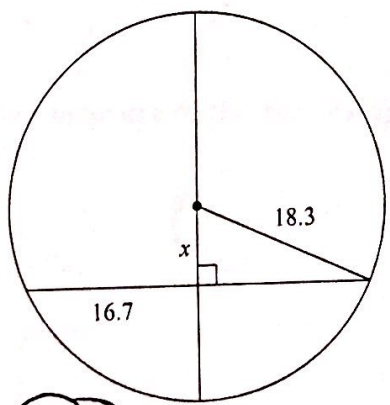
8)  $m\angle HGI$



$78^\circ$

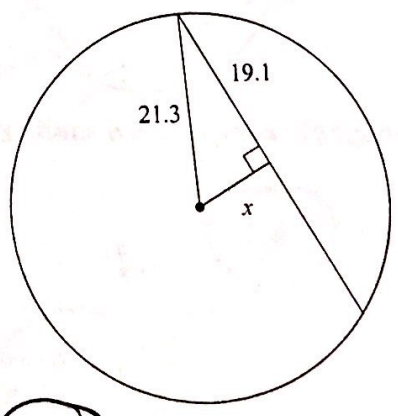
Find the length of the segment indicated. Round your answer to the nearest tenth if necessary.

9)



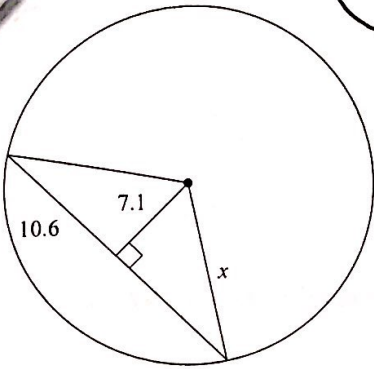
$7.5$

10)



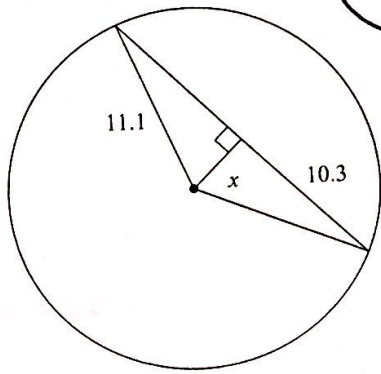
$9.4$

12.8



4.1

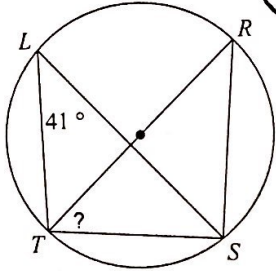
12)



Find the measure of the arc or angle indicated.

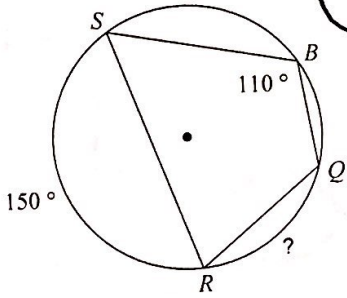
13)

49°



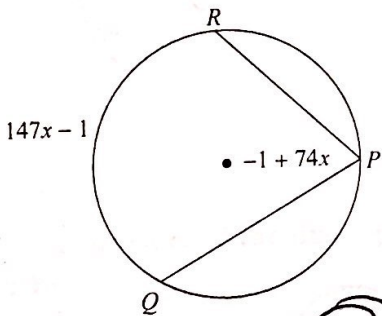
70°

14)



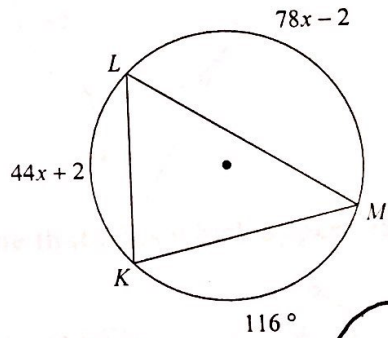
15) Find  $m\angle QPR$

73°



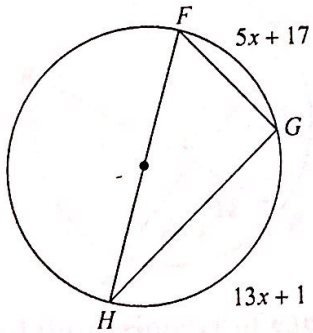
16) Find  $m\angle MKL$

77°



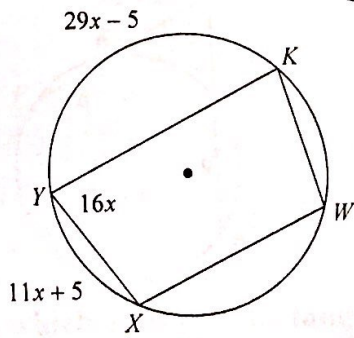
17) Find  $m\angle HFG$

59°



18) Find  $m\widehat{XY}$

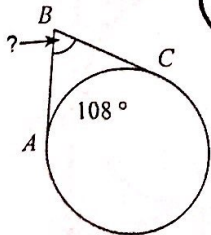
60°



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

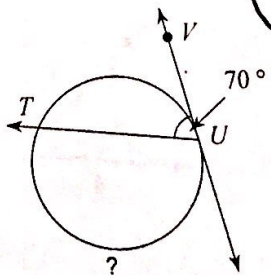
19)

72°



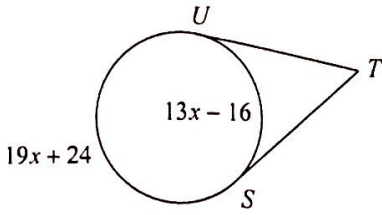
20)

220°



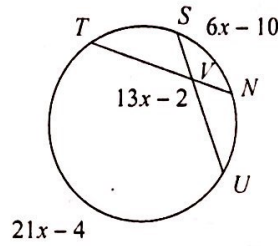
Find  $m\widehat{US}$

127°



22) Find  $m\widehat{SN}$

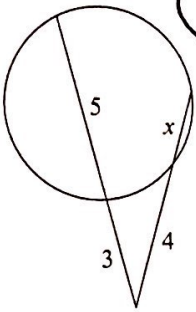
50°



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

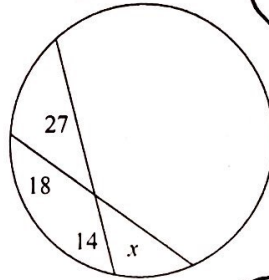
23)

2



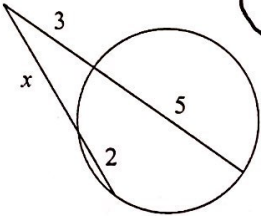
24)

21



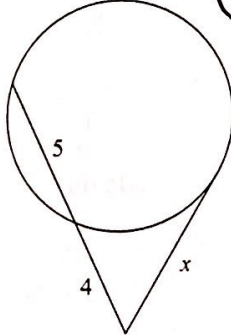
25)

4



26)

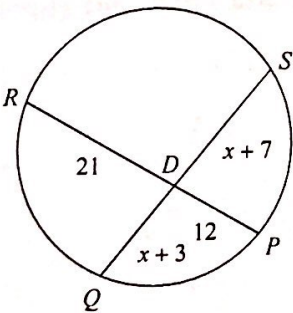
6



Find the measure of the line segment indicated. Assume that lines which appear tangent are tangent.

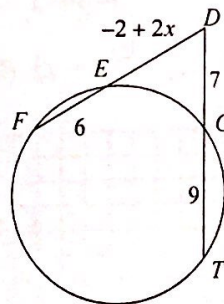
27) Find  $QS$

32



28) Find  $FD$

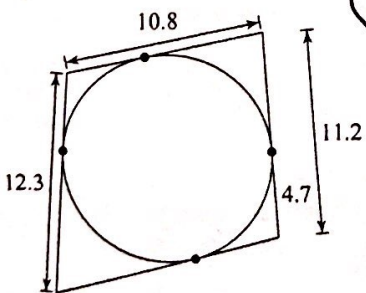
14



Find the perimeter of each polygon. Assume that lines which appear to be tangent are tangent.

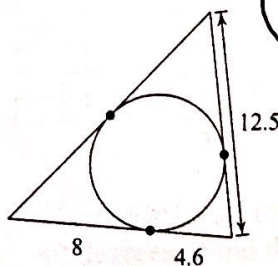
29)

47

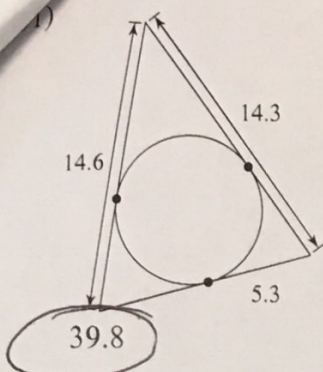


30)

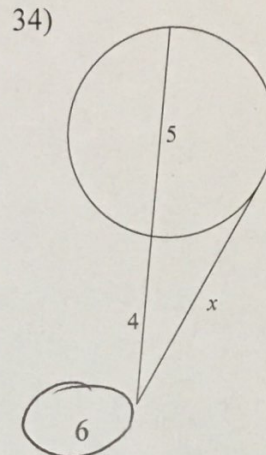
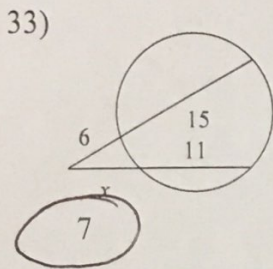
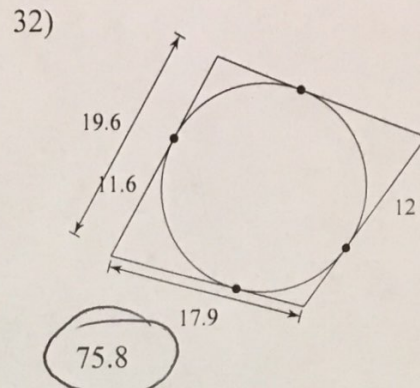
41







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



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

35) Center:  $(-14, -3)$   
Radius: 3

→  $(x + 14)^2 + (y + 3)^2 = 9$

37) Center:  $(-9, -12)$   
Point on Circle:  $(-11, -7)$

→  $(x + 9)^2 + (y + 12)^2 = 29$

36) Center:  $(0, -16)$   
Radius: 3

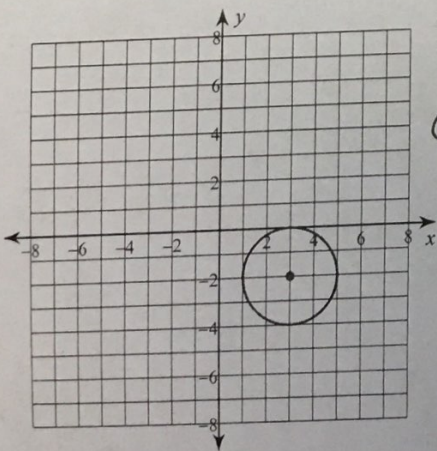
→  $x^2 + (y + 16)^2 = 9$

38) Ends of a diameter:  $(-8, 18)$  and  $(-4, 18)$

→  $(x + 6)^2 + (y - 18)^2 = 4$

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

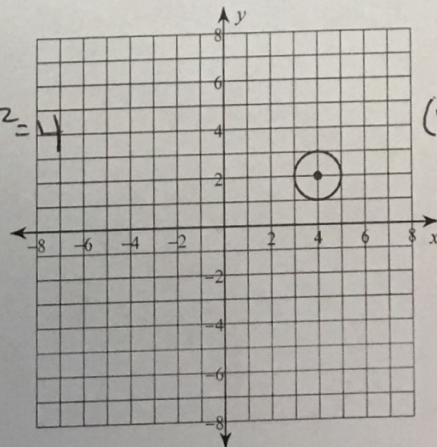
39)  $9 + 4y + x^2 + y^2 - 6x = 0$



Center:  $(3, -2)$   
Radius: 2

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

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



Center:  $(4, 2)$   
Radius: 1

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

41) The arc length is  $\pi$ , the radius is 6 cm, find the central angle.

$\pi = \frac{\theta}{360} \cdot 2\pi \cdot 6$   
 $\theta = 30^\circ$

42) The area of a sector is  $16\pi/9$ , the angle is 40 degrees. Find the radius.

$16\pi/9 = \frac{40}{360} \cdot \pi r^2$

$r = 4$