Name:_____ Geometry

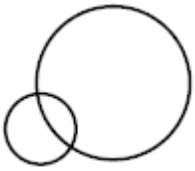
Date_____ Period:____

Chapter 10 Review

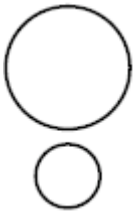
TO RECEIVE CREDIT, SHOW ALL WORK ON A SEPARATE SHEET OF PAPER.

Tell how many common tangents the given circles have.

1.

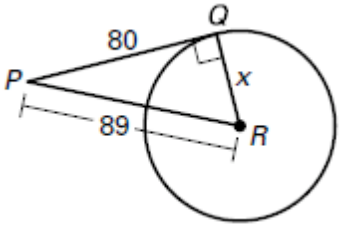


2.

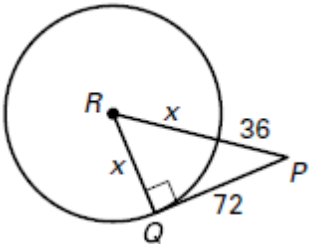


$\overline{QR}$ **is a radius of** $\odot R$ **and** $\overline{PQ}$ **is tangent to** $\odot R$**. Find the value of** x**.**

3.



4.

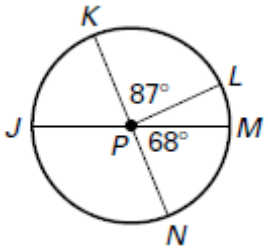


$\overline{JM}$ **and** $\overline{KN}$ **are diameters of** $\odot P$**. Identify the given arc as a** ***major arc*****,** ***minor arc*****, or** ***semicircle*****. Then find the measure of the arc.**

7. $m\overset{\frown}{MN}$ **8.** $m\overset{\frown}{LM}$

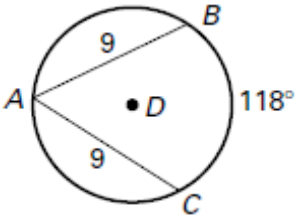
9. $m\overset{\frown}{KLN}$ **10.** $m\overset{\frown}{JLN}$

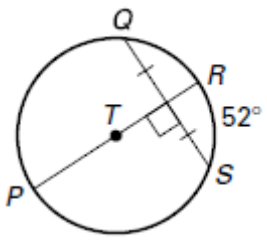
11. $m\overset{\frown}{JN}$ **12.** $m\overset{\frown}{NJL}$



Find the measure of the given arc.

13. $m\overset{\frown}{AC}$ **14.** $m\overset{\frown}{QRS}$





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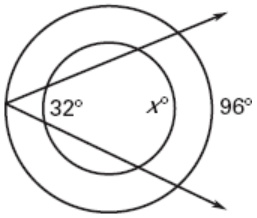
Find the value(s) of the variable(s).

15.



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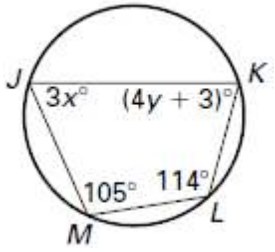

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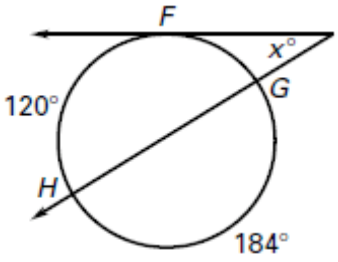
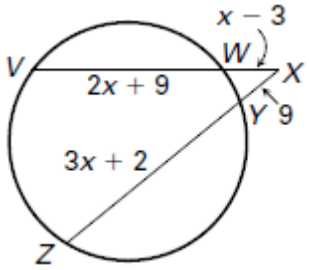


18.



Write the standard equation of the circle with the given center and radius.

19. Center (–4, 7), radius 6

20. Center (3, –9), radius 8.4

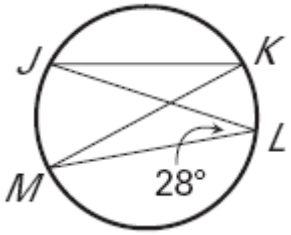
Graph the equation.

21. $(x + 3)^2 + (y - 2)^2 = 1$

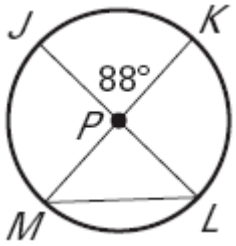
22. $(x - 4)^2 + (y + 4)^2 = 2$

23. A circle is described by the equation $(x - 3)^2 + (y - 2)^2 = 25$. Determine whether the line $y = 4x - 13$ is a *tangent*, *secant*, *secant that contains a diameter*, or *none of these*.

24. Find $m\angle K$



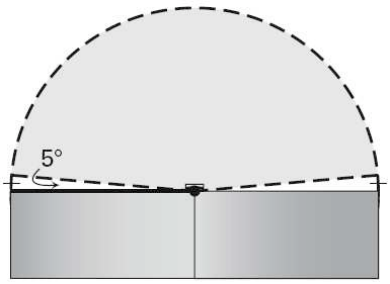
25. Find $m\angle JLM$



A water sprinkler covers the area shown in the figure. It moves through the covered area at a rate of about 5° per second.

39. What is the measure of the arc covered by the sprinkler

40. If the sprinkler starts at the far left position, how long will it take for the sprinkler to each the far right position?



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Answers

1. 2 **2.** 4 **3.** $x = 39$ **4.** $x = 54$

7. minor arc, 68° **8.** minor arc, 25°

9. semicircle, 180° **10.** major arc, 248°

11. minor arc, 112° **12.** major arc, 267°

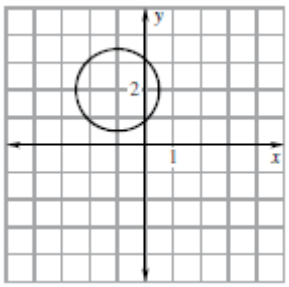
13. 121° **14.** 104° **15.** $x = 128$

16. $x = 22$, $y = 18$ **17.** $x = 32$ **18.** $x = 13$

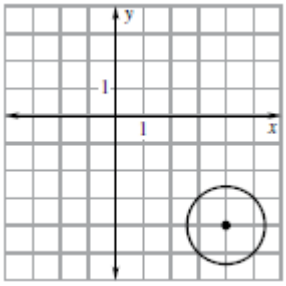
19. $(x + 4)^2 + (y - 7)^2 = 36$

20. $(x - 3)^2 + (y + 9)^2 = 70.56$

21.



22.



23. secant

24. 28˚

25. 46˚

39. 170°

40. 34 sec