

Geometry
Assignment 9.5

Name _____

Match the equation of a circle with its description.

1. $x^2 + y^2 = 4$

A. center $(-1, 4)$, radius 4

2. $x^2 + y^2 = 9$

B. center $(-2, -3)$, radius 3

3. $(x + 1)^2 + (y - 4)^2 = 16$

C. center $(0, 0)$, radius 2

4. $(x + 2)^2 + (y + 3)^2 = 9$

D. center $(2, 5)$, radius 3

5. $(x + 3)^2 + (y - 5)^2 = 16$

E. center $(-3, 5)$, radius 4

6. $(x - 2)^2 + (y - 5)^2 = 9$

F. center $(0, 0)$, radius 3

Write the standard equation of a circle using the given information.

7. center $(0, -4)$, radius 2

8. center $(-3, 2)$, radius 5

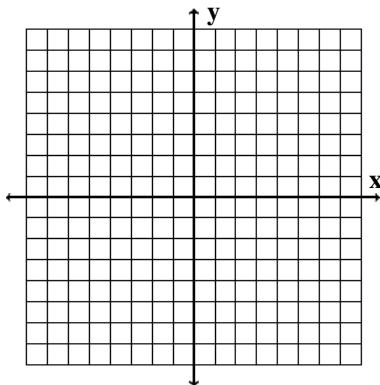
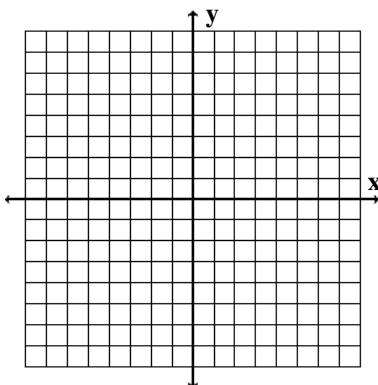
9. center $(-7, 8)$, point on circle $(-2, -4)$

10. center $(-3, -4)$ point on circle $(0, 2)$

Graph the equation of the circle.

11. $x^2 + y^2 = 25$

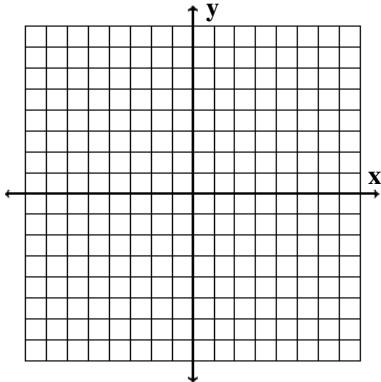
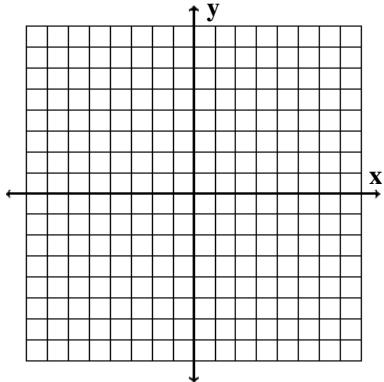
12. $x^2 + (y - 4)^2 = 9$



Graph the equation of the circle.

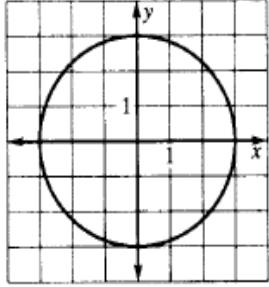
13. $(x + 1)^2 + (y - 1)^2 = 4$

14. $(x - 4)^2 + (y + 2)^2 = 16$

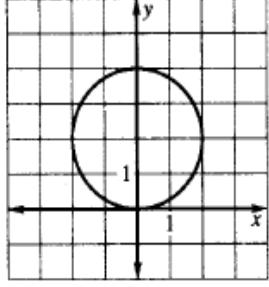


Give the coordinates of the center, the radius, and the equation of the circle.

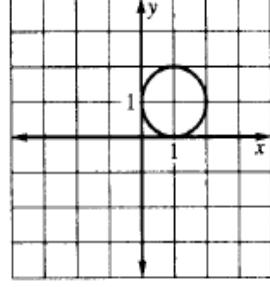
15.



16.



17.

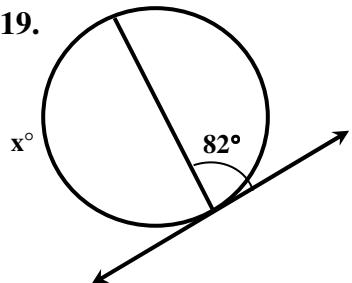


18. The point (-3, 2) lies on a circle whose equation is $(x + 3)^2 + (y + 1)^2 = r^2$.

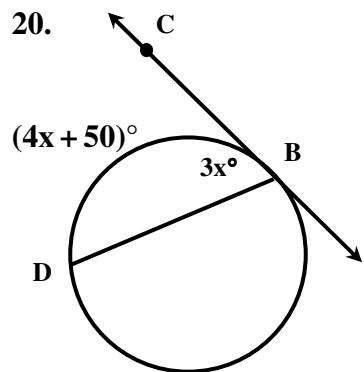
Determine the radius of the circle.

Find the value of x .

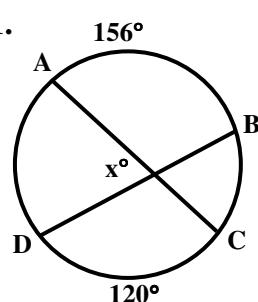
19.



20.

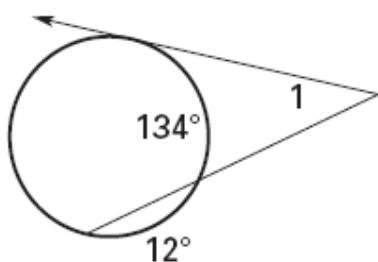


21.

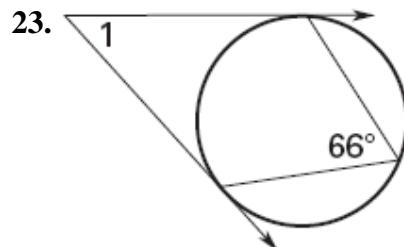


Find $m\angle 1$.

22.

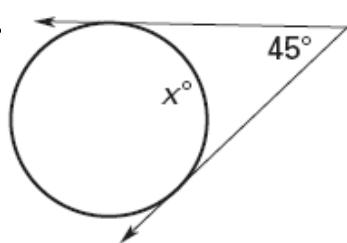


23.



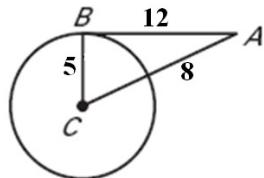
Find x .

24.

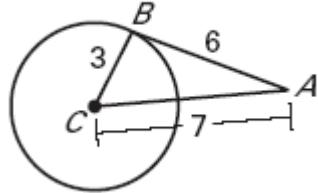


Determine whether \overline{AB} is tangent to $\odot C$.

25.

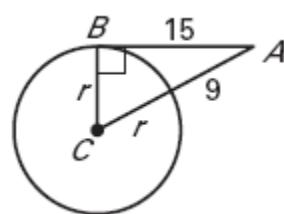


26.



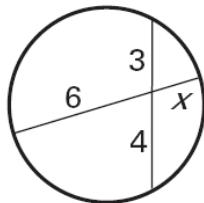
Find r .

27.

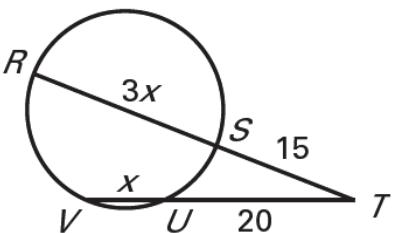


Find the value of x.

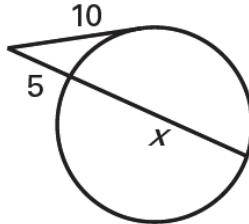
28.



29.

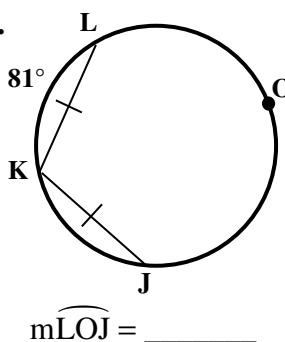


30.

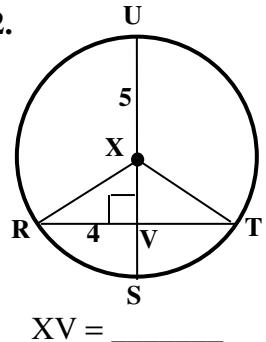


Find the indicated measure.

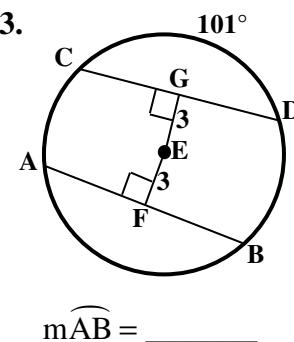
31.



32.



33.



Find the measure of the arc or angle in $\odot M$.

34. $m\angle QMP$

35. $m\angle NMO$

36. $m\angle PNO$

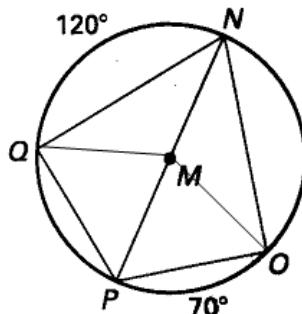
37. $m\angle QNP$

38. $m\widehat{QO}$

39. $m\widehat{NOP}$

40. $m\widehat{PQ}$

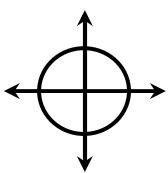
41. $m\widehat{OQN}$



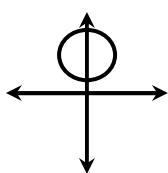
Answer Key:

1) C 2) F 3) A 4) B 5) E 6) D 7) $x^2 + (y+4)^2 = 4$ 8) $(x+3)^2 + (y-2)^2 = 25$ 9) $(x+7)^2 + (y-8)^2 = 169$

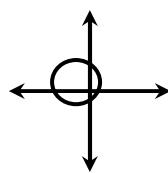
10) $(x+3)^2 + (y+4)^2 = 45$ 11)



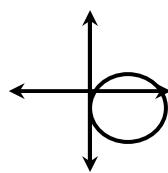
12)



13)



14)



15) $(0,0)$, $r = 3$, $x^2 + y^2 = 9$ 16) $(0,2)$, $r = 2$, $x^2 + (y-2)^2 = 4$ 17) $(1,1)$, $r = 1$, $(x-1)^2 + (y-1)^2 = 1$

18) $r = 3$ 19) $x = 196$ 20) $x = 25$ 21) $x = 42$ 22) $m\angle 1 = 40^\circ$ 23) $m\angle 1 = 48^\circ$ 24) $x = 135$

25) Yes 26) No 27) $r = 8$ 28) $x = 2$ 29) $x = 7$ 30) $x = 15$ 31) $m\widehat{LOJ} = 198^\circ$

32) $XV = 3$ 33) $m\widehat{AB} = 101^\circ$ 34) $m\angle QMP = 60^\circ$ 35) $m\angle NMO = 110^\circ$ 36) $m\angle PNO = 35^\circ$

37) $m\angle QNP = 30^\circ$ 38) $m\widehat{QO} = 130^\circ$ 39) $m\widehat{NOP} = 180^\circ$ 40) $m\widehat{PQ} = 60^\circ$ 41) $m\widehat{OQN} = 250^\circ$