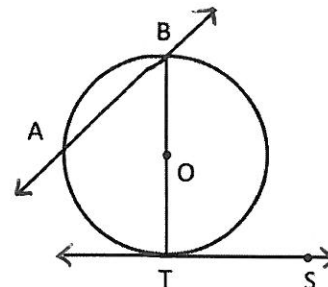


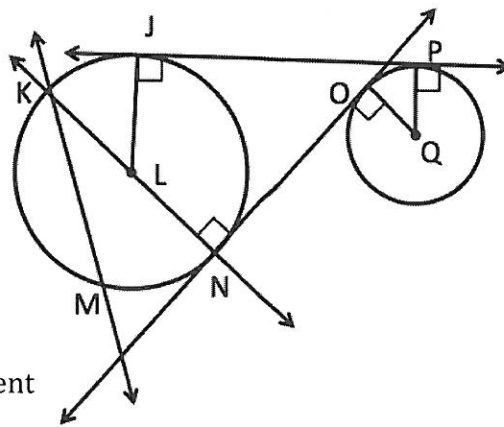
Using the figure on the right, name each of the following. (Use proper notation)

- |           |                      |
|-----------|----------------------|
| 1. Radius | 2. Diameter          |
| 3. Secant | 4. Tangent           |
| 5. Chord  | 6. Point of tangency |



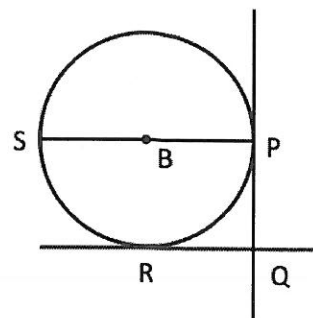
Match the notation with the term that best describes it.

- |                     |                            |
|---------------------|----------------------------|
| 7. $O$              | A. Center                  |
| 8. $\overline{NO}$  | B. Chord                   |
| 9. $\overline{QP}$  | C. Diameter                |
| 10. $\overline{MK}$ | D. Radius                  |
| 11. $L$             | E. Point of Tangency       |
| 12. $\overline{KN}$ | F. Common External Tangent |
| 13. $\overline{MK}$ | G. Common Internal Tangent |
| 14. $\overline{JP}$ | H. Secant                  |



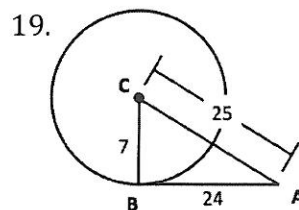
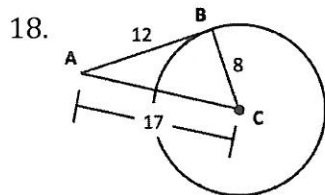
Use the figure on the right to answer the following.

- If  $BP = 4$ , find  $SP$ .
- If  $\overline{PQ}$  is tangent to circle B, find  $m\angle BPQ$ .
- If  $\overline{RQ}$  is tangent to circle B, how is  $\overline{BR}$  related to  $\overline{RQ}$ ?

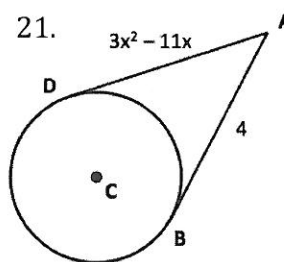
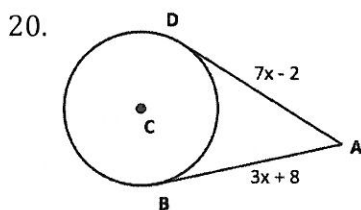


$\overline{BP}$  is the radius of Circle B

Tell whether  $\overleftrightarrow{AB}$  is tangent to Circle C. Show your work.



$\overline{AB}$  and  $\overline{AD}$  are tangent to Circle C. Solve for x.

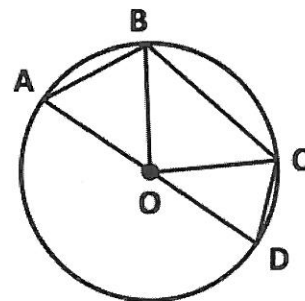


Use the figure below to answer the following questions.

22. If  $m\angle AOB = 60$ , find  $m\widehat{AB}$ .

23. If  $m\angle BOC = 90$ , find  $m\widehat{BC}$ .

24. Name the inscribed polygon in the figure.



Determine whether the arc is a minor arc, a major arc, or a semicircle of Circle C. (Assume the picture is drawn to scale)

25.  $\widehat{AE}$

26.  $\widehat{ADB}$

27.  $\widehat{FDE}$

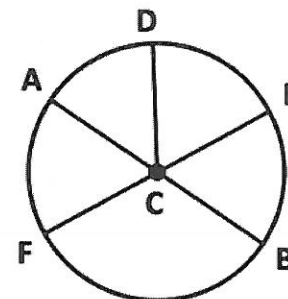
28.  $\widehat{DFB}$

29.  $\widehat{BE}$

30.  $\widehat{FA}$

31.  $\widehat{BDA}$

32.  $\widehat{FB}$



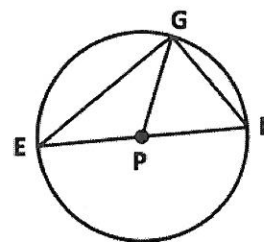
Use the figure on the right to answer the following questions.

33. Find  $m\widehat{FG}$ .

34. Find  $m\widehat{EGF}$ .

35. Find  $m\widehat{GE}$ .

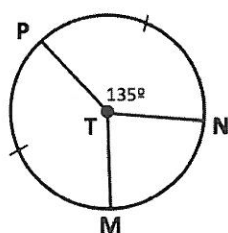
36. Find  $m\widehat{EFG}$ .



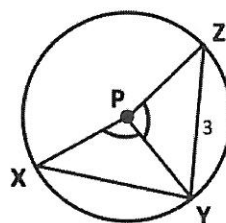
$$m\angle FPG = 75^\circ$$

Answer the following questions.

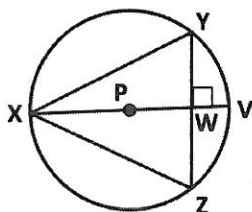
37. Find  $m\widehat{MN}$ .



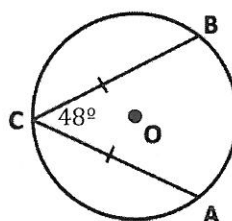
38. Find  $XY$ .



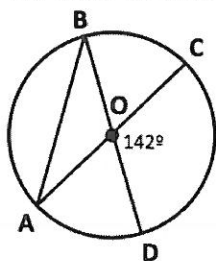
39.  $ZY = 6$ ,  $XW = 4$ , find  $XY$ .



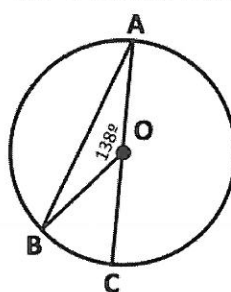
40. Find  $m\widehat{BC}$ .



41. Find  $m\angle BAC$ .



42. Find  $m\angle BAC$ .



Find the following measurements using the figure below.

43. Find  $m\angle ABC$

44. Find  $m\angle CED$

45. Find  $m\angle BDE$

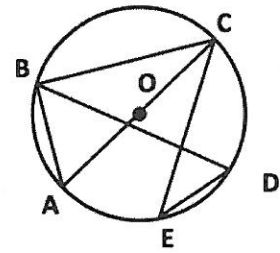
46. Find  $m\angle CBD$

47. Find  $m\angle ABD$

48. Find  $m\angle BCE$

49. Find  $m\widehat{AD}$

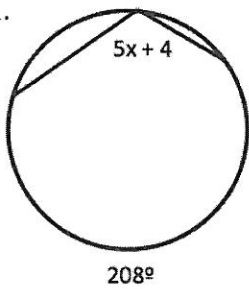
50. Find  $m\widehat{ABC}$



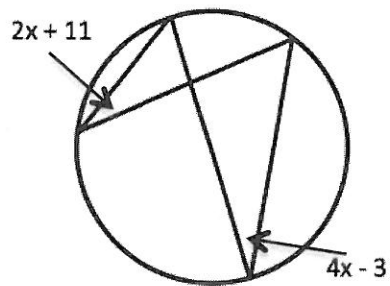
$m\widehat{CD} = 86^\circ$  and  
 $m\widehat{BE} = 95^\circ$

Find the value of x.

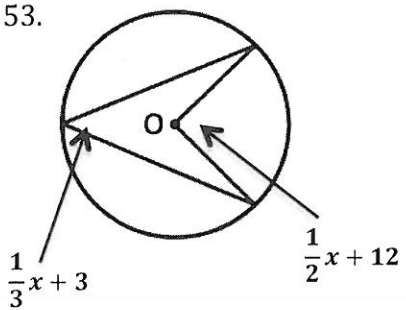
51.



52.



53.



**Find the center and radius of each circle.**

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

2.  $(x - 5)^2 + (y - 10)^2 = 54$

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

4.  $(x + 2)^2 + (y - 3)^2 = 36$

5.  $(x + 5)^2 + (y + 3)^2 = 1$

6.  $(x - \frac{1}{2})^2 + (y + \frac{3}{4})^2 = \frac{1}{4}$

**Given the center and radius, write the equation of each circle. (Leave in standard form.)**

7. Center = (0, 3), Radius = 4

8. Center = (-2, 5), Radius = 9

9. Center = (5, -1), Radius =  $2\sqrt{7}$

10. Center = (-6, -8), Radius = 7

**Find the center and radius of each circle.** \* Must convert to standard form \*

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

12.  $x^2 + y^2 + 8x - 4y = -4$

13.  $x^2 + y^2 - 16x = 0$

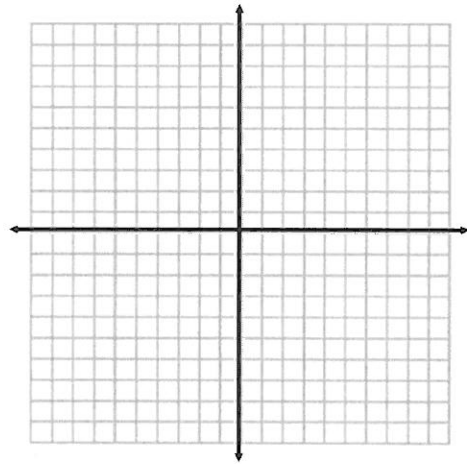
**Write the equation of each circle.**

14. Center = (1, 2)  
Point on the Circle = (4, 6)

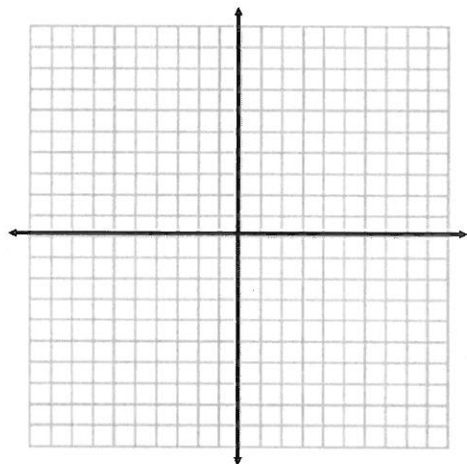
15. Center = (3, 2)  
Point on the Circle = (5, 2)

Find the center and radius of the circle, and then graph the equation.

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

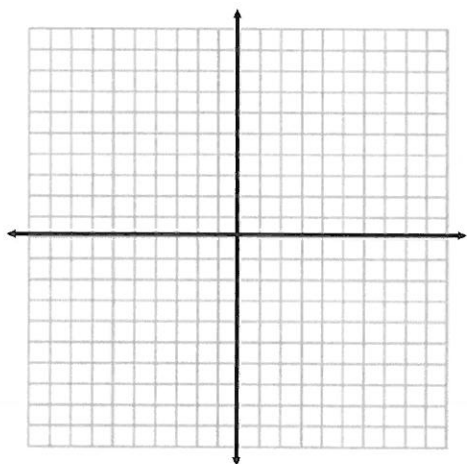


17.  $(x - 4)^2 + (y - 2)^2 = 36$



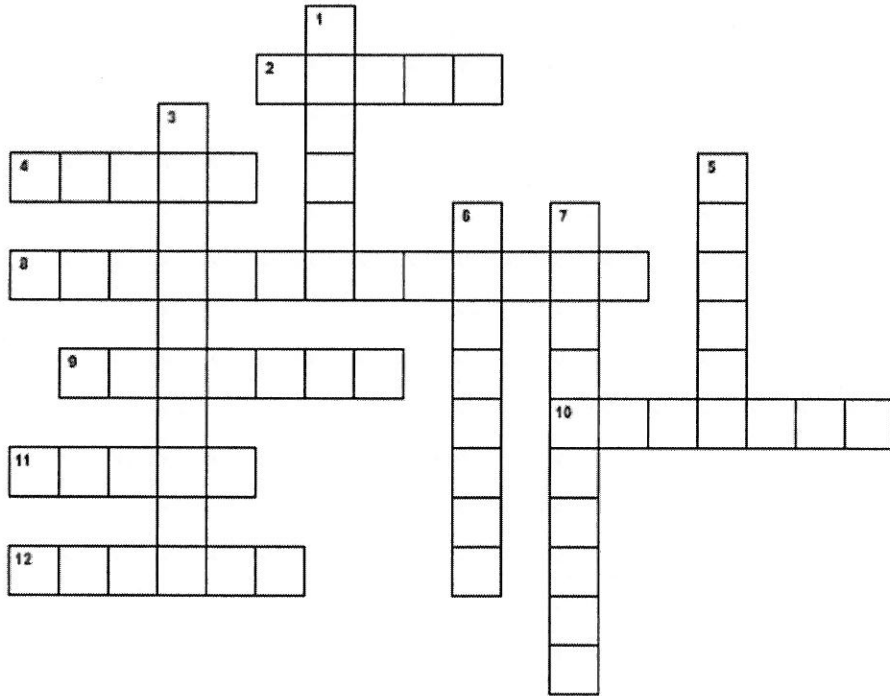
18.  $x^2 + y^2 - 4x + 10y + 20 = 0$

\* Convert to standard form. \*



## Geometry - Circle Quiz

Complete the following vocabulary crossword puzzle using the clues below.



### ACROSS

2. Arc between  $180^\circ$  and  $360^\circ$
4. Arc less than  $180^\circ$
8. When every side of a polygon is tangent to a circle
9. Line that intersects a circle at exactly one point
10. Angle whose vertex is the center of a circle
11. Segment whose endpoints are on the circle
12. Set of points that is equidistant to another point

### DOWN

1. Distance from the center to a point on the circle
3. Circles that share a center \* May need to look this up \*
5. Line that intersects a circle at two points
6. Chord that passes through the center of a circle
7. Arc that is exactly half a circle