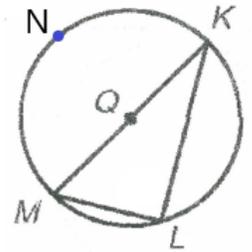


**Unit 6 Study Guide**

Name \_\_\_\_\_ S: \_\_\_\_\_

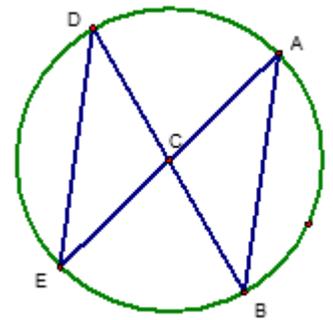
In the circle at right,  $\widehat{KL} = 115^\circ$ .

1. What is the measure of  $\widehat{MNK}$ ?
2. What is the measure of  $\angle MLK$ ?
3. What is the measure of  $\widehat{ML}$ ?
4. What is the measure of  $\angle MKL$ ?

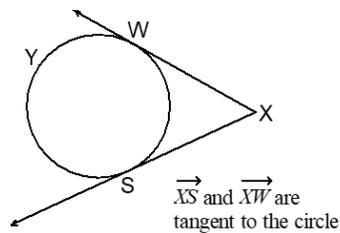


In the circle C,  $m\angle EAB = 35^\circ$ , and  $m\angle ACB = 110^\circ$ . Find the following measures.

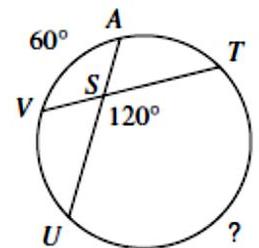
5.  $m\widehat{AB} =$
6.  $m\widehat{EB} =$
7.  $m\angle EDB =$
8.  $m\widehat{DA} =$
9.  $m\angle ACD =$



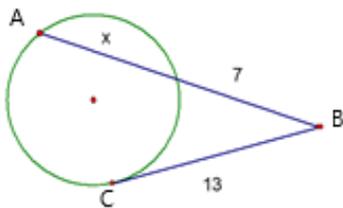
10. If  $m\widehat{WS} = 124^\circ$ , find  $m\angle WXS$ .



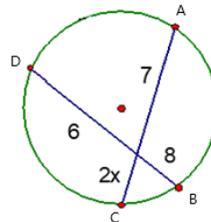
11. Find the missing arc UT.



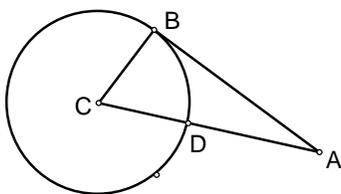
12. What is the length of secant  $\overline{AB}$ ?



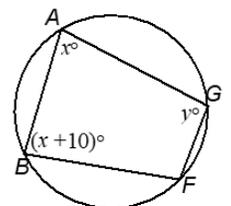
- 13 Find the length of cord  $\overline{AC}$ .



14. AB is tangent to C. If  $AD = 9$  and  $CB = 8$ , find  $\overline{AB}$ .



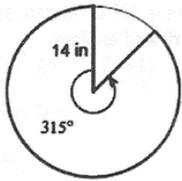
15. If  $m\angle F = 100$ , find  $x =$  \_\_\_\_\_ and  $y =$  \_\_\_\_\_



16. When two tangents meet at an external point, they're lengths are \_\_\_\_\_? Draw an example.

17. Use the bolded portion of the circled defined by the given angle. Leave your answer in terms of  $\pi$ .

Arc Length = \_\_\_\_\_, Sector Area = \_\_\_\_\_



19. What is the length of the diameter of circle A with its center at  $A(-3, 7)$  & point T  $(2, 13)$  which lies on the circle.

21. What is the standard form of a circle with a center of  $(-5, 6)$  and a radius of  $5\sqrt{3}$ ?

23. If a central angle measures 145 degrees and creates a sector with an area of  $200 \text{ cm}^2$ , what is the radius of the circle?

25. Two pizzas have the same diameter of 12 in. One pie is cut into 6 slices, while the other is cut into 10 slices. How much more pizza per slice do you get if you order the pizza with 6 slices?

18. What is the center and diameter of the circle:

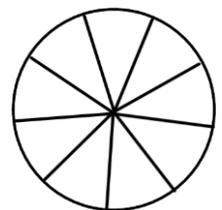
$$x^2 + y^2 + 20x - 14y - 20 = 0$$

20. Which point lies on a circle with the following properties:  
**Center:  $(2, -7)$  and a radius = 5**

- A.  $(2, 5)$   
B.  $(5, 10)$   
C.  $(-5, 11)$   
D.  $(5, -11)$

22. What is the general form of a circle with a center of  $(4, -7)$  and a diameter of 10?

24. The radius of a bike wheel is 12 inches. There are 9 spokes that support the circular wheel. What is the curved length of four consecutive spokes?



26. **CONSTANT OF PROPORTIONALITY:** In the circle below, a small and a large circle share a central angle of 60. The larger circle's radius is 11.94, and the intercepted arc length is 12.5 m. If the smaller circle's radius is 3.98 m, what is the small circle's intercepted arc length?

