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Date:

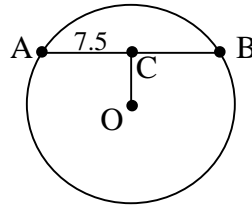
Pts:

**Technical Math Mod C → Geometry**  
**Lesson 7 - Study Guide – Circles**

1) Which of the following is defined to be a line segment whose endpoints are on a circle?

- A. radius    B. circumference    C. chord    D. center

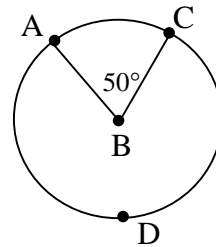
2)  $\overline{OC}$  is perpendicular to  $\overline{AB}$ . What is the length of  $\overline{AB}$ ?



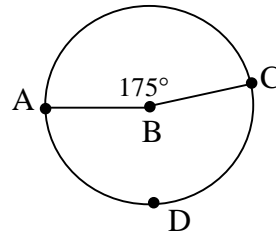
3) Which of the following is defined to be an arc that lies outside of a central angle?

- A. major arc    B. minor arc    C. semi-circle

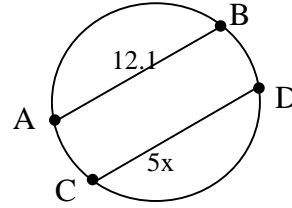
4) If  $\angle ABC$  measures  $50^\circ$ , what is the measure of  $\widehat{ADC}$ ?



5) If  $\angle ABC$  measures  $175^\circ$ , what is the measure of  $\widehat{AC}$ ?

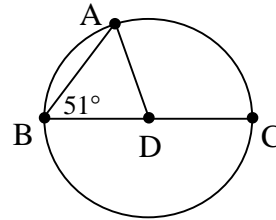


6)  $\widehat{AB}$  is congruent to  $\widehat{CD}$ . What is the value of  $x$ ? Round your answer to 2 decimal places.



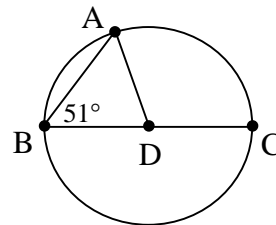
7) In the diagram below, point D is the center of the given circle. What is the measure of  $\widehat{AB}$ ?

- A  $25.5^\circ$
- B  $51^\circ$
- C  $78^\circ$
- D  $102^\circ$



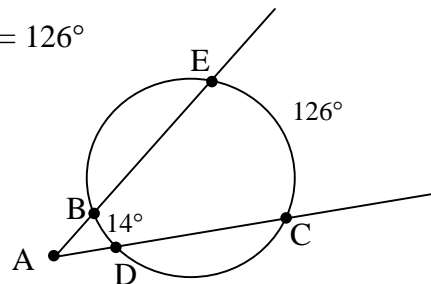
8) Point D is the center of the given circle. What is  $m\widehat{AC}$ ?

- A  $25.5^\circ$
- B  $51^\circ$
- C  $78^\circ$
- D  $102^\circ$



9) A tangent-tangent angle intercepts two arcs that measure  $112^\circ$  and  $248^\circ$ . What is the measure of the tangent-tangent angle?

10) What is the measure of  $\angle CAE$ ?  $\widehat{BD} = 14^\circ$ ,  $\widehat{EC} = 126^\circ$



11) The measure of a secant-secant angle is  $60^\circ$ . Which of the choices below could be the measures of the intercepted arcs? Circle all that apply.

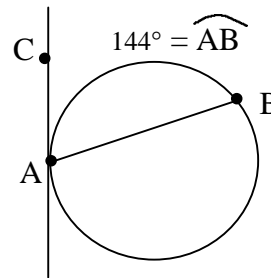
A  $40^\circ, 100^\circ$       B  $34^\circ, 135^\circ$       C  $90^\circ, 210^\circ$

D  $60^\circ, 137^\circ$       E  $76^\circ, 196^\circ$       F  $55^\circ, 118^\circ$

12) If the measure of a tangent-chord angle is  $29^\circ$ , then what is the measure of the intercepted arc inside the angle?

A  $151^\circ$       B  $29^\circ$       C  $87^\circ$       D  $58^\circ$

13) What is the measure of  $\angle CAB$ , the tangent-chord angle shown below?

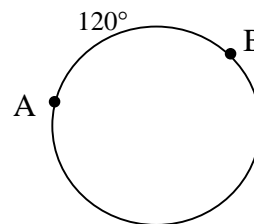


14) To the nearest hundredth, what is the circumference of a circle with a radius of 7?

A 153.94      B 21.99      C 43.98

15) To the nearest hundredth, what is the radius of a circle with a circumference of 8?

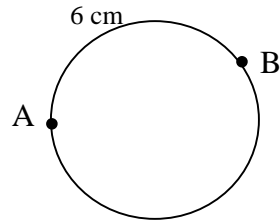
16) If the circumference of the circle below is 54 cm, what is the length of  $\widehat{AB}$ ?



17) To the nearest hundredth, what is the area of a circle with a radius of 8?

18) Fill in the blank. If a circle has a circumference of 21 units, then its area is \_\_\_\_\_ square units. Round your answer to two decimal places.

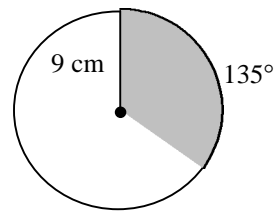
19) If  $\widehat{AB}$  measures  $149^\circ$ , what is the length of the radius of this circle? Round your answer to two decimal places.



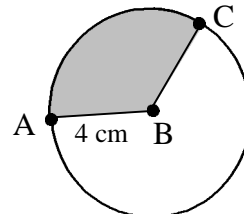
20) Fill in the blank. A pizza with a diameter of 22 inches is cut into 10 equal slices. Each slice of the pizza has an area of \_\_\_\_\_ square inches. Round your answer to two decimal places.

21) What is the area of the shaded region below?

- A 150.80
- B 56.55
- C 95.43



22) Find the measure of  $\widehat{AC}$ , given that the shaded region has an area of 18.43 square centimeters. Round your answer to two decimal places.



23) The \_\_\_\_\_ of a triangle is the point of intersection of a triangle's angle bisectors.

- A incenter
- B circumcenter
- C altitude

24) The circumcenter of a polygon is the center of the \_\_\_\_\_ circle.

- A circumscribed      B inscribed      C adjacent

25) In the square below, the two semi-circles are congruent. Find the area of the shaded region.  
If necessary, round your answer to two decimal places.

