Unit 10—Circles
Practice Test

Good Luck To: _____
Period: _____

1. Define ***chord:***

   _____

   _____

2. Define ***central angle:***

   _____

   _____

3. Define ***minor arc:***

   _____

   _____

4. Define ***tangent:***

   _____

   _____

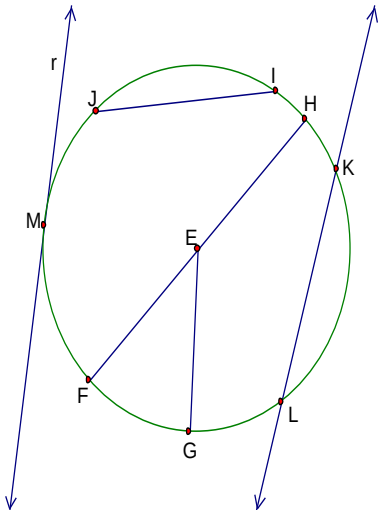
5. Complete the following theorem with the correct word or words: **If two segments from the same exterior point are _____ to a circle, then they are _____.**

6. Complete the following theorem with the correct word or words: **In the same circle, or in congruent circles, two minor arcs are congruent if and only if their _____ are congruent.**

7. Complete the following theorem with the correct word or words: **If one chord is a perpendicular _____ of another chord, then the first chord is a _____.**

8. Complete the following theorem with the correct word or words: **If an angle is inscribed in a circle, then its measure is _____ the measure of its intercepted arc.**

9. Identify all the parts of Circle E:



9.

a. $\overline{IJ}$ _____

b. $\overline{FH}$ _____

c. $\overline{EG}$ _____

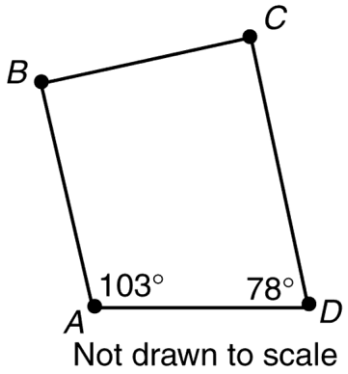
d. $\overleftrightarrow{KL}$ _____

e. line r _____

f. point M _____

g. point E _____

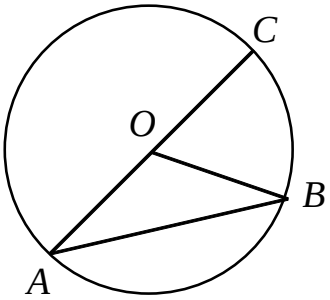
10. What must be the measures of $\angle B$ and $\angle C$ so that a circle can be circumscribed about *ABCD*?



10. $m\angle B =$ _____

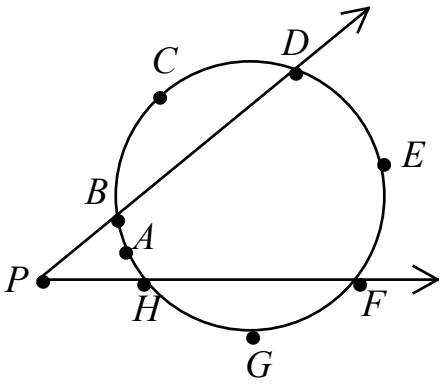
$m\angle C =$ _____

11. Given: In $\odot O$, $m\overset{\frown}{BAC} = 296^\circ$. Find $m\angle AOB$.



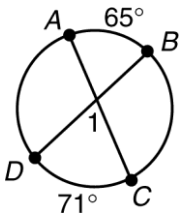
11. $m\angle AOB$ _____

12. In the figure shown (not drawn to scale), $m\overset{\frown}{BCD} = 112^\circ$, $m\overset{\frown}{DEF} = 98^\circ$, $m\overset{\frown}{FGH} = 130^\circ$, and $m\overset{\frown}{HAB} = 20^\circ$. Find $m\angle FPD$.



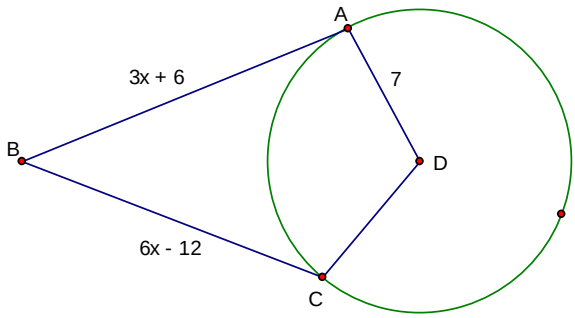
12. $m\angle FPD =$ _____

13. Find the measure of $\angle 1$.



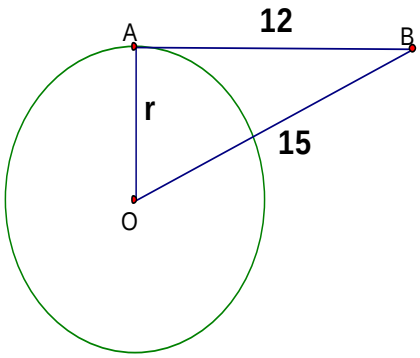
13. $m\angle 1 =$ _____

14. In the figure below, $\overline{AB}$ is tangent to $\odot D$ at A and $\overline{BC}$ is tangent to $\odot D$ at C. What is the value of x?



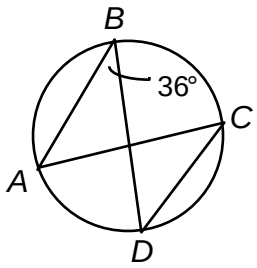
14. $x =$ _____

15. You are standing at point *B*. Point *B* is 15 feet from the center of the circular water storage tank and 12 feet from point *A*. $\overline{AB}$ is tangent to $\odot O$ at *A*. Find the radius of the tank.



15. Radius = _____

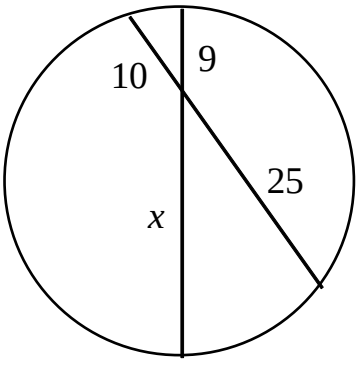
16. Find $m\overset{\frown}{ACD}$ and $m\angle C$.



16. $m\overset{\frown}{ACD} =$ _____

$m\angle C =$ _____

17. Find the value of *x*. (Round to one decimal place.)

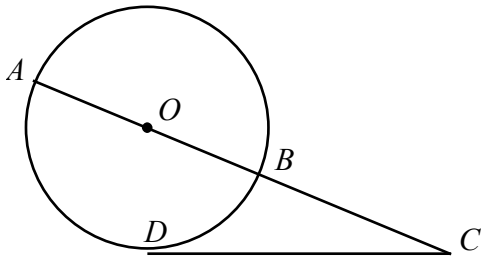


17. $x =$ _____

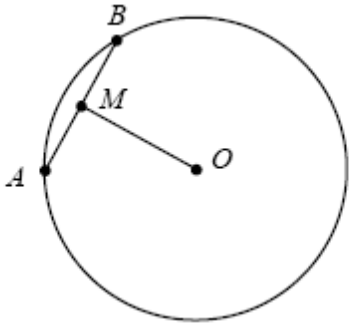
18. Find the equation of the circle with center (–3, –1) and radius of 3.

18. _____

19. Find the diameter of Circle O. $BC = 10$ and $DC = 12$

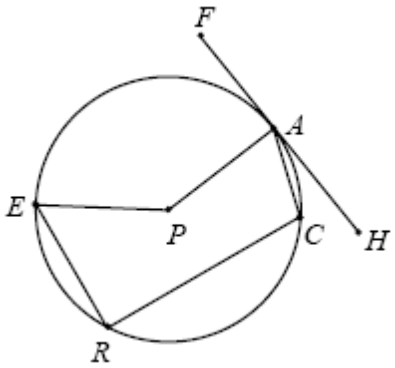


(PE) 20. In the diagram below, *M* is the midpoint of chord *AB* on circle *O*, *AB* = 16 centimeters, and *OM* = 15 centimeters.



What is the radius of circle *O*?
A. 15 cm
B. 17 cm
C. 23 cm
D. 34 cm

(PE) 21. Use circle *P* below:



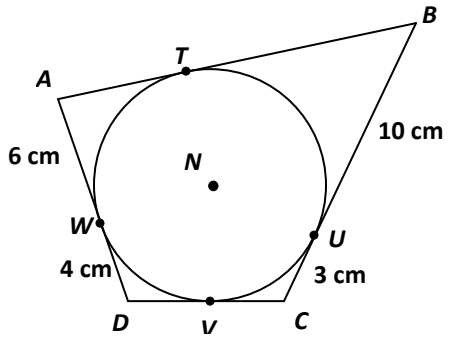
Which angle represents a inscribed angle?
A. $\angle FAP$
B. $\angle ERC$
C. $\angle PAC$
D. $\angle EPA$

19. _____

20. _____

21. _____

(SE) 22. All of the segments shown in the figure below are tangents to $\odot N$.

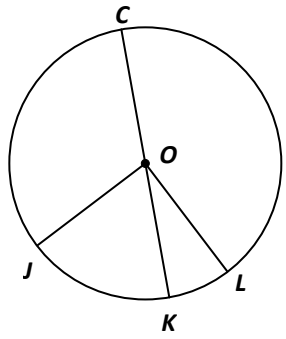


Given the measures in the figure above, what is the perimeter of quadrilateral *ABCD*?

A. 23 cm
B. 40 cm
C. 46 cm
D. 52 cm

22. _____

(SE) 23. $\overline{CK}$ is the diameter of $\odot O$, $m\overset{\frown}{JC} = 19x°$, and $m\overset{\frown}{JK} = 9(x+2)-6°$.

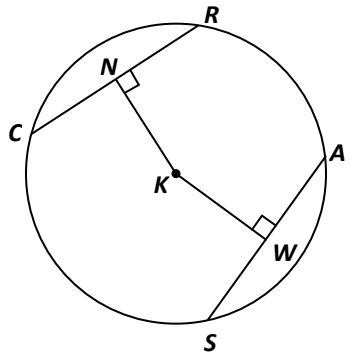


What is the value of *x*?

A. $\frac{4}{5}$
B. $\frac{5}{6}$
C. 4
D. 6

23. _____

(SE) 24. In $\odot K$, $NK = 3x + 4$, $KW = 5x - 8$, $SA = 5x - 4$, and $\overline{KN} \cong \overline{KW}$.



What is *CN*?

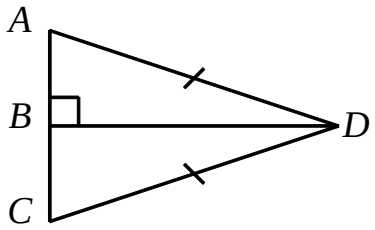
A. 6

B. 13

C. 22

D. 26

(LTMR) 25. $\triangle ABD \cong \triangle CBD$. Name the theorem or postulate that justifies the congruence.



(LTMR) 26. Draw and label a $45°, 45°, 90°$ triangle and label the sides with the rule we use to find the value of each side.

(LTMR) 27. Write an equation for the line passing through the point $(-5, -2)$ that has a slope of –3.

24. _____

25. _____

26. Draw and label the triangle in the space below:

27. _____