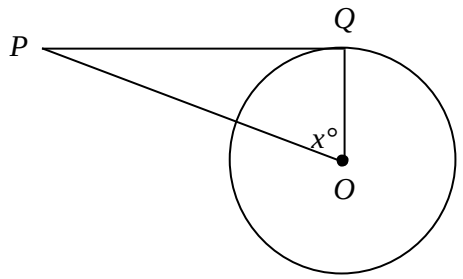
Common Core Unit 6 Test Review

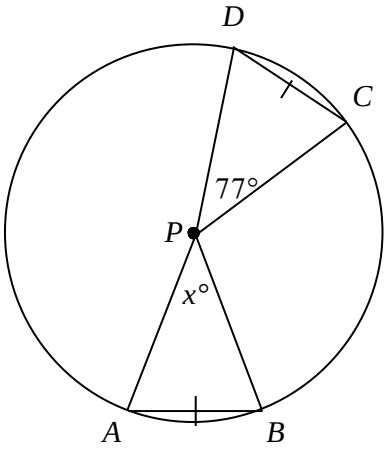
Multiple Choice: *Identify the choice that best completes the statement or answers the question.*

____ 1. Assume that lines that appear to be tangent are tangent. O is the center of the circle. Find the value of x **if** $m\angle P$ **= 12. (figures are not drawn to scale.)**



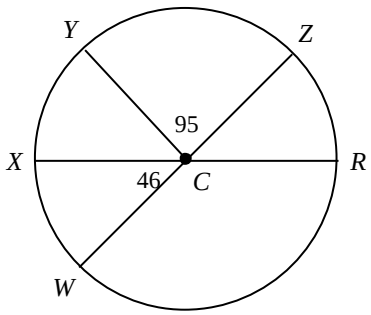
a. 78 b. 39 c. 102 d. 24

____ 2. Find the value of *x*. If necessary, round your answer to the nearest tenth. The figure is not drawn to scale.



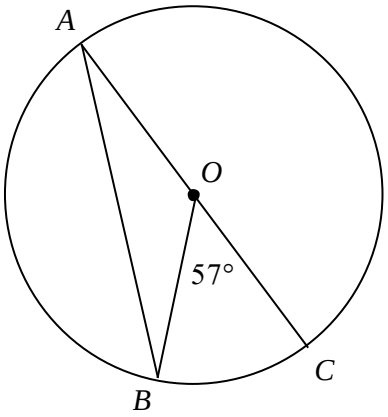
a. 13 b. 26 c. 77 d. 38.5

____ 3. $\overline{WZ}$ and $\overline{XR}$ are diameters. Find the measure of arc *ZWX*. (The figure is not drawn to scale.)



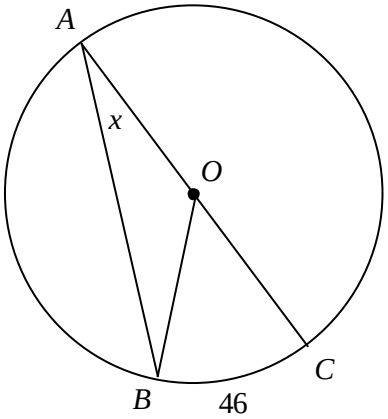
a. 226 b. 275 c. 39 d. 321

____ 4. Find the measure of $\angle BAC$. (The figure is not drawn to scale.)



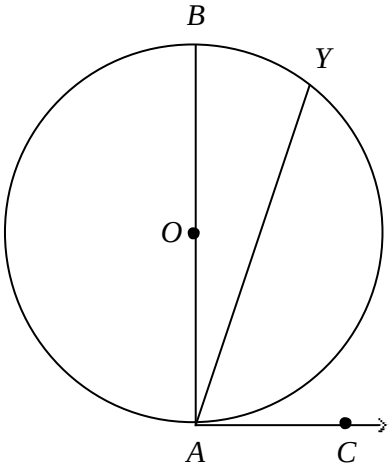
a. 57 b. 28.5 c. 33 d. 114

____ 5. Find x. (The figure is not drawn to scale.)



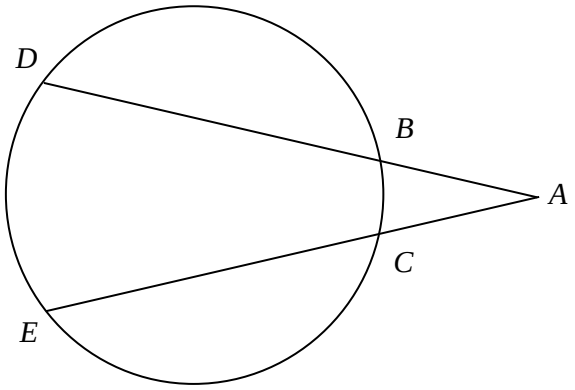
a. 92 b. 44 c. 23 d. 46

____ 6. If $m(\text{arc } BY) = 40$, what is $m\angle YAC$? (The figure is not drawn to scale.)



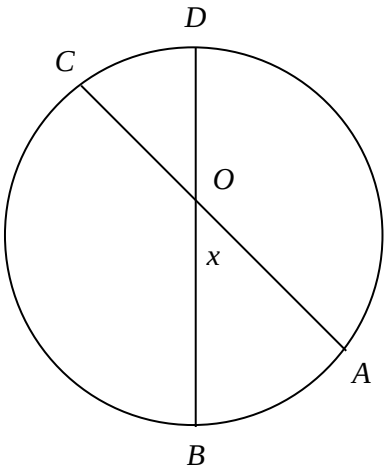
a. 140 b. 100 c. 70 d. 80

____ 7. m(arc DE) = 96 and m(arc BC) = 67. Find $m\angle A$. (The figure is not drawn to scale.)



a. 14.5 b. 62.5 c. 81.5 d. 29

____ 8. Find the value of x for m(arc AB) = 46 and m(arc CD) = 25. (The figure is not drawn to scale.)



a. 35.5° b. 58.5° c. 71° d. 21°

____ 9. Write the standard equation for the circle with center (2, 7), $r = 4$

a. $(x-7)^2 + (y-2)^2 = 16$
b. $(x-2)^2 + (y-7)^2 = 4$
c. $(x-2)^2 + (y-7)^2 = 16$
d. $(x+2)^2 + (y+7)^2 = 4$

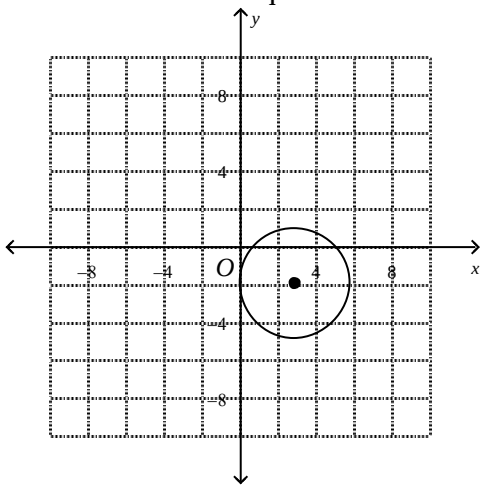
____ 10. Write the standard equation for the circle with center (–6, –8), that passes through (0, 0)

a. $(x-6)^2 + (y-8)^2 = 10$
b. $(x-6)^2 + (y-8)^2 = 196$
c. $(x+6)^2 + (y+8)^2 = 14$
d. $(x+6)^2 + (y+8)^2 = 100$

____ 11. Find the center and radius of the circle with equation $(x+9)^2 + (y+5)^2 = 64$.

a. center (5, 9); $r = 8$
b. center (9, 5); $r = 64$
c. center (–9, –5); $r = 64$
d. center (–9, –5); $r = 8$

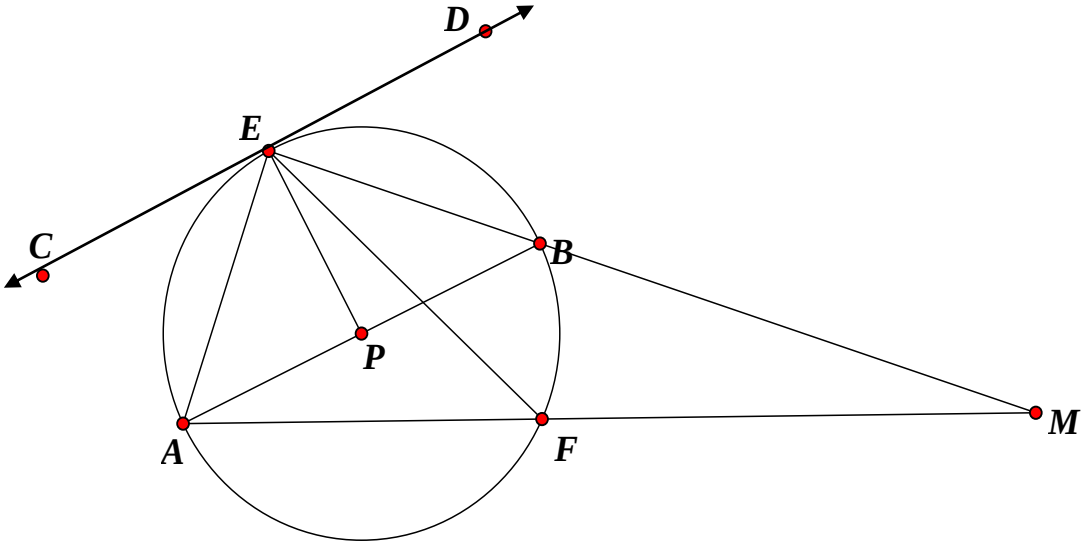
____ 12. Write the standard equation of the circle in the graph.



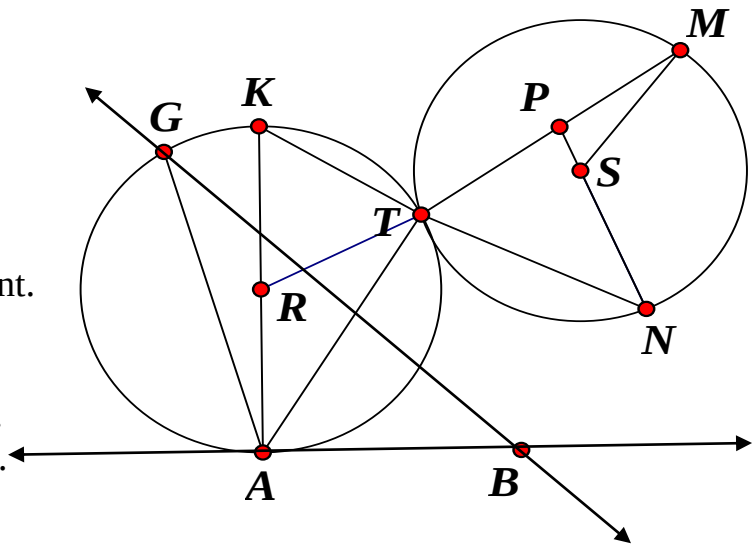
a. $(x + 3)^2 + (y - 2)^2 = 9$
b. $(x - 3)^2 + (y + 2)^2 = 9$
c. $(x - 3)^2 + (y + 2)^2 = 18$
d. $(x + 3)^2 + (y - 2)^2 = 18$

In the figure, $\overline{AB}$ is a diameter, P is the center of the circle, $\overleftrightarrow{CD}$ is a tangent to the circle at E. If $m\widehat{BE} = 100^\circ$ and $m\widehat{BF} = 40^\circ$, find the following measures:

13._____ $m\widehat{AF}$
14._____ $m\widehat{AE}$
15._____ $m\angle EPB$
16._____ $m\angle CEA$
17._____ $m\angle M$
18._____ $m\angle EAB$
19._____ $m\angle GFA$
20._____ $m\angle PEF$
21._____ $m\angle AEP$
22._____ $m\angle EFM$
23._____ $m\angle DEF$
24._____ $m\angle BAF$



Matching. In the figure the two circles, with centers R and S, intersect only at T and $\overline{AB} \perp \overline{RA}$.



25. $\overleftrightarrow{AB}$ is a _____.
26. $\overline{KA}$ is a _____.
27. $\overline{NS}$ is a _____.
28. $\overleftrightarrow{BG}$ is a _____.
29. Circles R and S are _____ tangent.
30. $\overline{KT}$ is a _____.
31. R is a _____.
32. Point P is a(n) _____ of circle S.
33. Point B is a(n) _____ of circle S.

A. diameter	B. chord	C. secant
D. radius	E. center of circle	F. tangent
G. interior point	H. exterior point	I. externally
J. internally		

34. In a circle with radius 6, a sector has an area 15π. What is the length of the arc of the sector?

Length of the arc =_____

35. The circumferences of two circles are 6π and 10π. What is the ratio of their areas?

Ratio of Areas=_____

36. The radius of a sector is 12 and the measure of the arc is 130°. What is

a) the length of the arc and a) _____

b) the area of the sector b) _____

38. If each angle has the given measure and is in standard position, determine the quadrant in which its terminal side lies.

_____ a. $\frac{-5\pi}{6}$ _____ b. 470°

39. Change each degree measure to radian measure in terms of π.

_____ a.. 80° _____ b. 285°

40. Change each radian measure to degrees.

_____ a. $\frac{-\pi}{3}$ _____ b. $\frac{16\pi}{9}$

41. Write the word TRUE or the word FALSE. Determine whether the angles are coterminal.

_____ a. $-215^\circ, 215^\circ$ _____ b. $\frac{-5\pi}{3}, \frac{\pi}{3}$

42. Find the reference angle for each angle with the given measure.

_____ a. 92° _____ b. $\frac{7\pi}{8}$

43. Identify the amplitude, period, phase shift, and vertical shift for each function.

a. $y = -5\cos(3x) + 7$ A:_____ P: _____ Vertical: _____

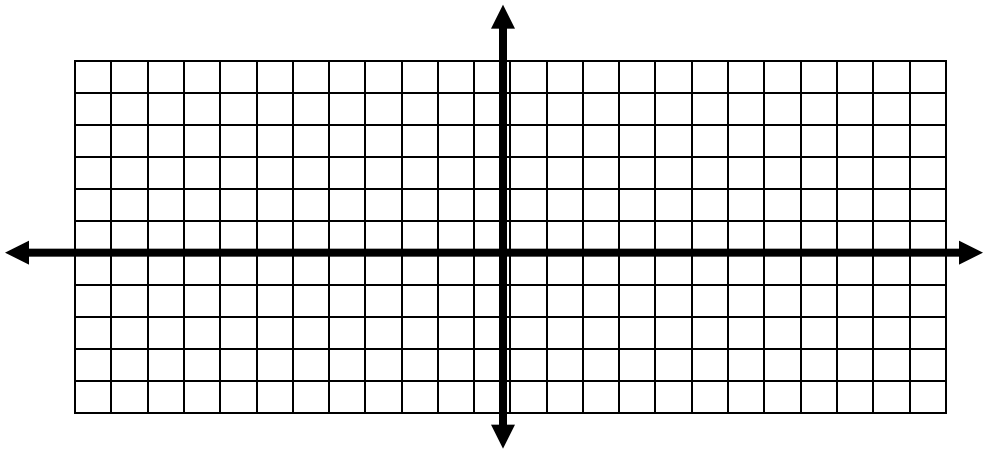
b. $y = 6\sin(4x) - 13$ A:_____ P: _____ Vertical: _____

44. Graph $y = -3\sin(2x) + 1$

A=_____

Period=_____

Vertical Shift=_____



45. Find the exact value of each trigonometric function.

a. cos 30° _____ b. tan 150° _____ c. sin 60° _____ d. sin 225° _____

47. Find the values of the three given trigonometric functions of an angle in standard position if $(-5,8)$ lies on its terminal side.

$\sin\theta =$ _____ $\cos\theta =$ _____ $\tan\theta =$ _____