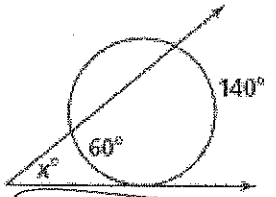
Name _____ Class _____ Date _____

Chapter Test (continued) **Form A**
Chapter 12

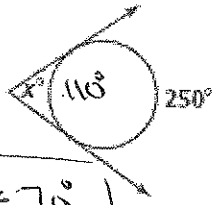
Assume that lines that appear to be tangent are tangent. Find the value of each variable. If your answer is not an integer, round to the nearest tenth.

18.



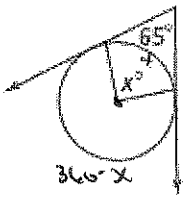
$x = 40°$

19.



$x = 70°$

20.

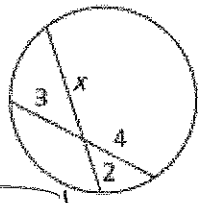


$65 = \frac{1}{2}(360 - x - x)$

$65 = 180 - x$

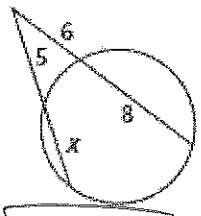
$x = 115°$

21.



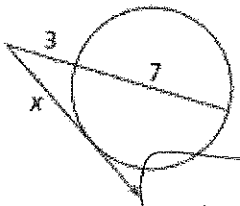
$x = 6$

22.



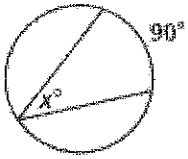
$x = 11.8$

23.



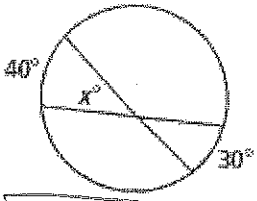
$x = \sqrt{21}$

24.



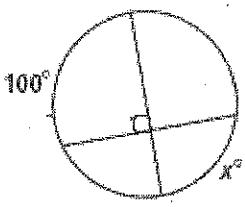
$x = 45°$

25.



$x = 35°$

26.

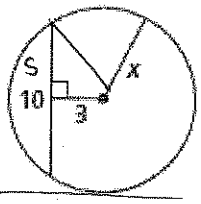


$90 = \frac{1}{2}(100 + x)$

$180 = 100 + x$

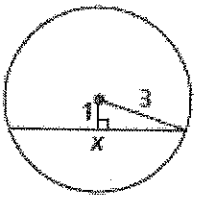
$x = 80°$

27.



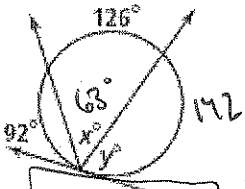
$x = \sqrt{34}$

28.



$x = 2\sqrt{8}$

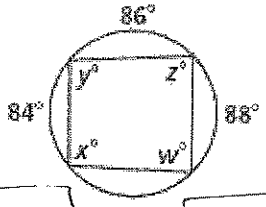
29.



$x = 63$

$y = 71$

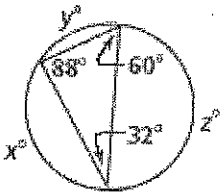
30.



$w = 85°$ $102°$ $y = 95°$

$x = 87°$ $z = 93°$

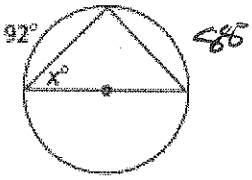
31.



$y = 64°$ $z = 176°$

$x = 120°$

32.



$x = 44°$

Name Key Class _____ Date _____

Chapter Test **Form A**

Chapter 12

Find the center and radius of each circle.

1. $x^2 + y^2 = 100$

$(0,0)$ $r=10$

2. $(x-11)^2 + (y+6)^2 = 81$

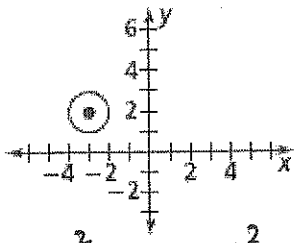
$(11,-6)$ $r=9$

3. $(x+1)^2 + (y+4)^2 = 7$

$(-1,-4)$ $r=\sqrt{7}$

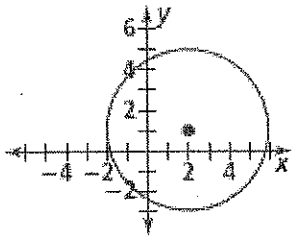
Write the equation of each circle.

4.



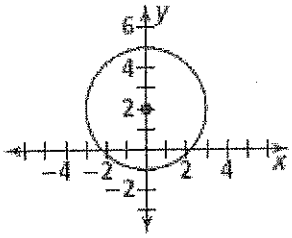
$(x+3)^2 + (y-2)^2 = 1$

5.



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

6.



$(x)^2 + (y-2)^2 = 9$

7. Find the circumference and area of the circle whose equation is $(x-1)^2 + y^2 = 25$. Round your answer to the nearest tenth.

$C = 10\pi$ ≈ 31.4

$A = 25\pi$ ≈ 78.5

8. Write an equation of the circle that passes through (2, 8) with center (−3, 4).

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

$5^2 + 4^2 = r^2$

$r^2 = 51$

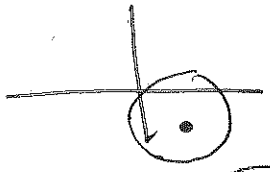
$r = \sqrt{51}$

$\boxed{(x+3)^2 + (y-4)^2 = \sqrt{51}}$

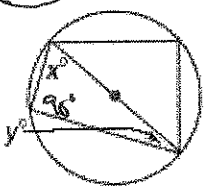
9. Graph the circle $(x-1)^2 + (y+2)^2 = 4$. State the center and radius of the circle.

$C: (1,-2)$

$r = 2$



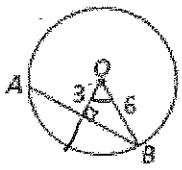
10. In the figure at the right, a quadrilateral is inscribed in the circle. Find the value of $x+y$.



$x + y = 90$

Find $m\widehat{AB}$.

15.



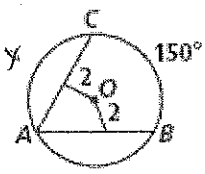
$\cos x = \frac{3}{6}$

$\cos^{-1} \frac{3}{6}$

$x = 60°$

$\widehat{AB} = 120°$

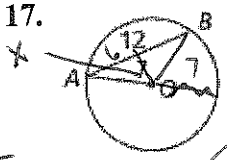
16.



x

$105°$

17.



$\sin^{-1} \frac{6}{7}$

$x = 59°$ $\times 2 =$

$\widehat{AB}$ $118°$