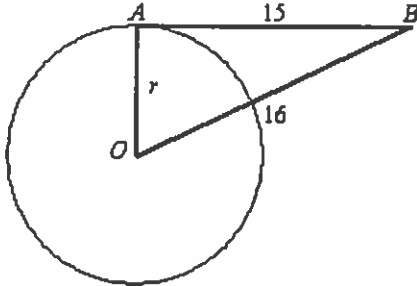
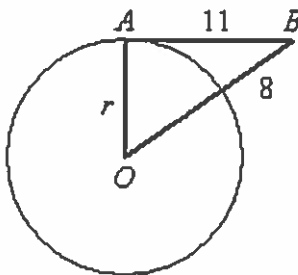


Advanced Geometry Chapter 10 Test

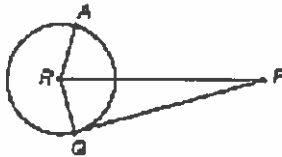
1. You are standing at point B . Point B is 16 feet from the center of the circular water storage tank and 15 feet from point A . \overline{AB} is tangent to $\odot O$ at A . Find the radius of the tank.



2. \overline{AB} is tangent to $\odot O$ at A (not drawn to scale). Find the length of the radius r , to the nearest tenth.



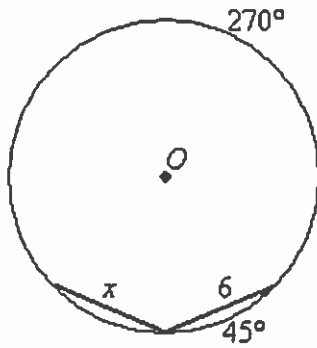
3. Given $RP = 22$, $RA = 6$, and \overline{PQ} is tangent to $\odot R$ at Q , find PQ .



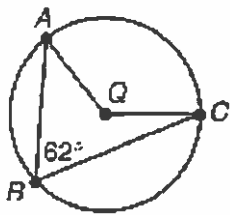
Name: _____

ID: A

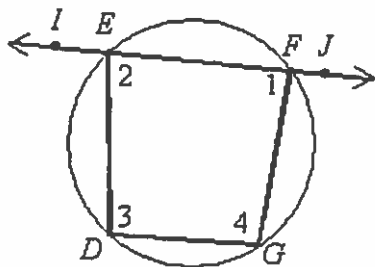
7. Find the value of x to the nearest tenth.



8. Given $\odot Q$ and $m\angle B = 62^\circ$, find $m\widehat{AC}$.



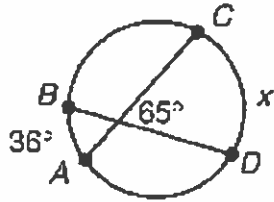
9. Given: $m\angle IED = 116^\circ$ and $m\angle JFG = 100^\circ$
Find the measure of each unknown angle. (not drawn to scale)



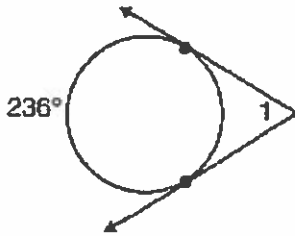
Name: _____

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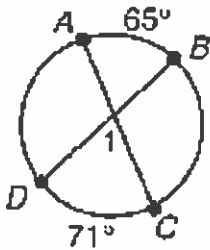
14. Write an equation that can be used to find x . Then solve the equation for x .



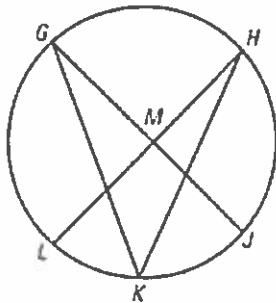
15. Find the measure of $\angle 1$.



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



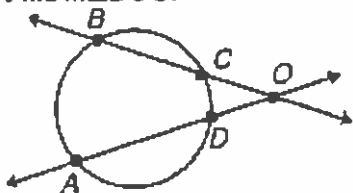
17. If $m\angle G = 25^\circ$, $m\angle H = 20^\circ$, and $m\angle K = 50^\circ$, what is $m\angle GMH$?



Name: _____

ID: A

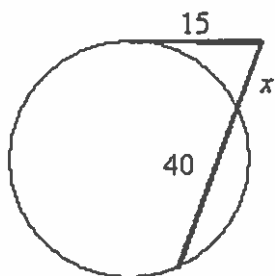
18. $m\widehat{AB} = 82^\circ$, $m\widehat{CD} = 30^\circ$
Find $m\angle DOC$.



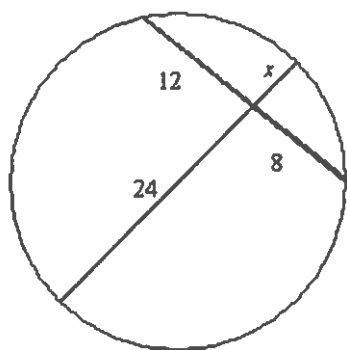
Not drawn to scale

Find the value of x .

- 19.



- 20.

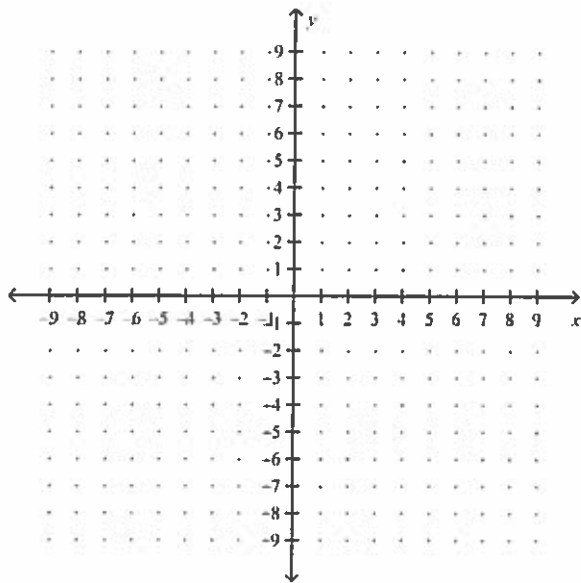


Name: _____

ID: A

21. Write the standard equation of a circle with center $(-3, -4)$ and radius 6.

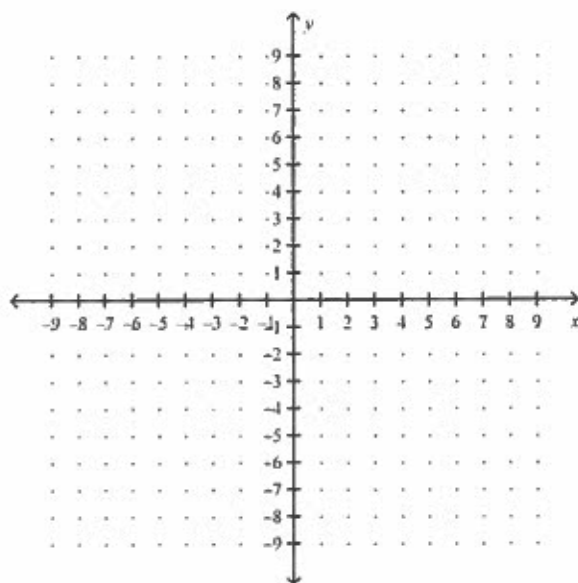
22. Sketch the graph of the equation $(x - 2)^2 + (y + 1)^2 = 13$. Label the coordinates of the center.



Name: _____

ID: A

23. Open-ended: On a coordinate plane, draw a circle with radius 4 units and center at any point except the origin. Write the equation of your circle.



24. Write the standard equation of a circle with its center at the origin and radius 3.

a. $x^2 + y^2 = 6$

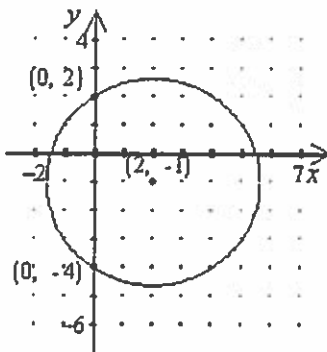
c. $x^2 + y^2 = 9$

b. $\frac{x^2}{6} + \frac{y^2}{6} = 1$

d. $x^2 + y^2 = 3$

**Advanced Geometry Chapter 10 Test
Answer Section**

1. 5.6 ft.
2. 3.6
3. $\sqrt{448} = 8\sqrt{7} \approx 21.2$
4. $\angle QAO$ and $\angle QCO$
5. B
6. 35°
7. 6
8. 124°
9. $m\angle 1 = 80^\circ, m\angle 2 = 64^\circ, m\angle 3 = 100^\circ, m\angle 4 = 116^\circ$
10. $m\widehat{BC} = 80^\circ, m\angle D = 40^\circ$
11. $m\angle B = 102^\circ, m\angle C = 77^\circ$
12. C
13. 70°
14. $\frac{1}{2}(36^\circ + x) = 65^\circ, x = 94^\circ$
15. 56°
16. 68°
17. 95° . Since $m\angle G = 25^\circ, m\widehat{JK} = 50^\circ$; since $m\angle H = 20^\circ, m\widehat{KL} = 40^\circ$; and since $m\angle K = 50^\circ, m\widehat{GH} = 100^\circ$. By the Arc Addition Postulate, $m\widehat{JL} = m\widehat{JK} + m\widehat{KL}$, and $m\widehat{JL} = 50^\circ + 40^\circ = 90^\circ$. Since $m\angle GMH = \frac{1}{2}(m\widehat{GH} + m\widehat{JL})$,
 $m\angle GMH = \frac{1}{2}(100^\circ + 90^\circ) = 95^\circ$.
18. 26°
19. 5
20. 4
21. $(x+3)^2 + (y+4)^2 = 36$



22.

23. Check students' graphs. Equations should be of the form $(x - h)^2 + (y - k)^2 = 16$, where the center of the circle is (h, k) .
24. C