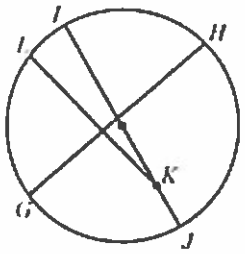
Name: _____ Class: _____ Date: _____ ID: A

Advanced Geometry, Q10A (10.1-10.3)

1. Identify two chords.



a. $\overline{IJ}$ and $\overline{KL}$
b. $\overline{GH}$ and $\overline{KL}$
c. $\overline{GH}$ and $\overline{IJ}$
d. $\overline{GI}$ and $\overline{HJ}$

2. A circle is the set of all points in a plane that _____.
a. have a center
b. are equidistant from a given point
c. have a diameter
d. lie within a given radius

3. A segment with endpoints on a circle is a _____.
a. secant
b. radius
c. tangent
d. chord

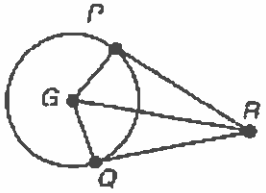
4. The center of a circle lies on _____.
a. every diameter
b. the circle
c. a tangent line
d. every chord

5. If a circle has a diameter of 12, then it has _____.
a. a radius of 4
b. a radius of 24
c. a radius of 6
d. a diameter of 6

6. Two coplanar circles are concentric if _____.
a. they have the same center
b. they have exactly one point of intersection
c. they have no points of intersection
d. they have congruent radii

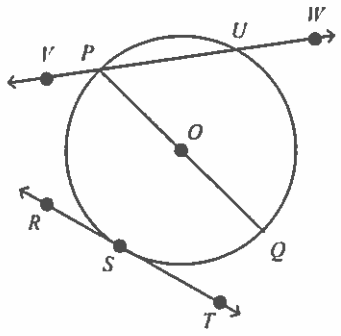
7. A line which intersects a circle at exactly one point is called_____.
   a. a point of tangency
   b. a tangent line
   c. a chord
   d. a secant

8. $\overline{RP}$ is tangent to $\odot G$ at P. $\overline{RQ}$ is tangent to $\odot G$ at Q. Choose the statement that is NOT true.

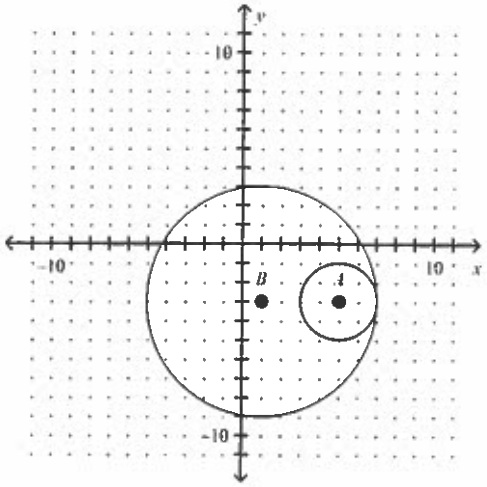


   a. $\angle GRP \cong \angle GRQ$
   b. $\angle PGR \cong \angle QGR$
   c. $\overline{PR} \cong \overline{QR}$
   d. $\angle GPR$ is obtuse.

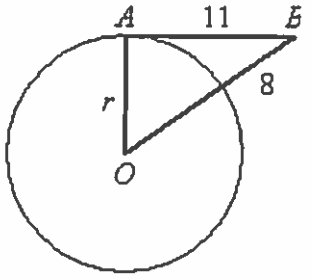
9. Identify the diameter for circle O.



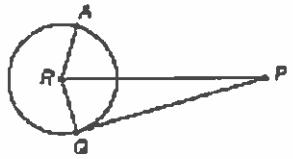
10. Give the center and radius of circle A and circle B. Describe the intersection of the two circles and describe all common tangents.



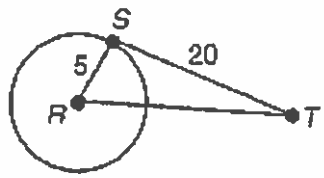
11. $\overline{AB}$ is tangent to $\odot O$ at A (not drawn to scale). Find the length of the radius r, to the nearest tenth.



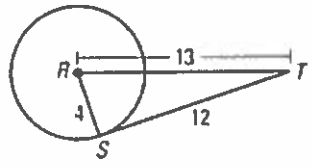
12. Given $RP = 22$, $RA = 6$, and $\overline{PQ}$ is tangent to $\odot R$ at Q, find PQ.



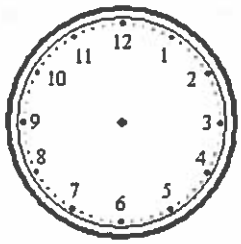
13. Given $\overline{ST}$ is tangent to $\odot R$ at S, find RT.



14. In the diagram, $\overline{RS}$ is a radius of circle R. Is $\overline{ST}$ tangent to circle R? Explain.

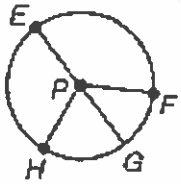


15. How many degrees does a minute hand move in 35 minutes?



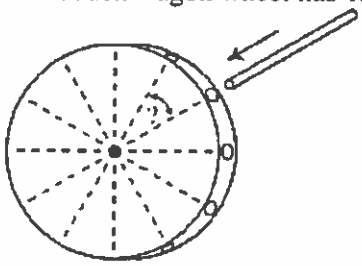
a. 105°
b. 140°
c. 175°
d. 210°

16. A minor arc of $\odot P$ is _____.



a. $\overset{\frown}{EHF}$
b. $\overset{\frown}{FGH}$
c. $\overset{\frown}{EFG}$
d. $\overset{\frown}{FEH}$

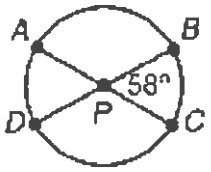
17. A wooden wagon wheel has 12 equally spaced spokes radiating from the central hub.



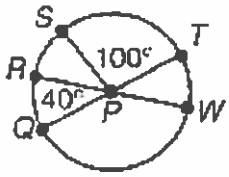
What is the measure of the angle that determines the separation between two adjacent spoke holes?

a. 22.5°
b. 30°
c. 12°
d. 45°

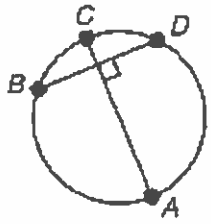
18. Find the measure of $\overset{\frown}{DBC}$ in $\odot P$.



19. If $\overline{QT}$ and $\overline{RW}$ are diameters in $\odot P$, find $m\overset{\frown}{QW}$.



20. Given $\overline{AC}$ bisects $\overline{BD}$, choose the true statement that refers to the figure.



a. $\overset{\frown}{CD} = \overset{\frown}{BA}$

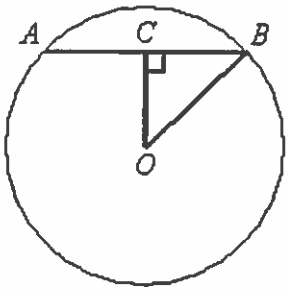
b. $\overset{\frown}{BCD}$ is a major arc.

c. $\overline{AC}$ is a diameter.

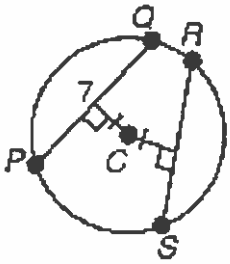
d. $\overset{\frown}{BAD}$ is a minor arc.

Name: _____ ID: A

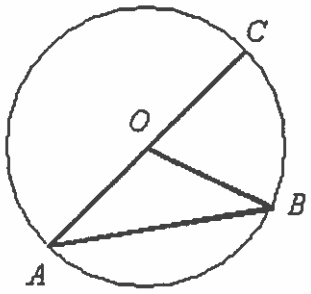
21. Given circle O with radius 5 and $OC = 3$. Find the length of $\overline{AB}$.



22. Find RS in $\odot C$. Explain your reasoning.



23. (BONUS) Given: In $\odot O$, $m\overset{\frown}{BAC} = 290°$. Find $m\angle B$.



a. 14.5°
b. 29°
c. 17.5°
d. 35°

24. (BONUS) Find the value of x.