1. Identify two chords.
   a. $IJ$ and $KL$
   b. $GH$ and $KL$
   c. $GH$ and $IJ$
   d. $GI$ and $HJ$

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

4. 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

5. The circle is circumscribed by the pentagon as shown (not drawn to scale). If $QZ = 10$, $YX = 9$, $XW = 13$, $UW = 16$, and $SU = 17$, find the perimeter of the pentagon.

6. $RP$ is tangent to $\odot G$ at $P$. $RQ$ 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. $PR \cong QR$
   d. $\angle GPR$ is obtuse.

7. Define a secant of a circle. Draw a sketch to illustrate the definition.
8. Give the center and radius of circle A and circle B. Describe the intersection of the two circles and describe all common tangents.

9. \( AB \) is tangent to \( O \) at \( A \) (not drawn to scale). Find the length of the radius \( r \), to the nearest tenth.

10. Given \( ST \) is tangent to \( R \) at \( S \), find \( RT \).

11. Given \( AO \) and \( CO \) are tangent to \( Q \) at \( A \) and \( C \), respectively, list any right angles.

12. If \( QT \) and \( RW \) are diameters in \( P \), find \( m \angle QW \).

13. Find the value of \( x \).

a. 11.6  
b. 12.4  
c. 6.7  
d. 8.0
14. Given circle $O$ with radius 5 and $OC = 3$. Find the length of $AB$.

![Circle O with A and B](image)

15. 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 $A$. $AB$ is tangent to $O$ at $A$. Find the radius of the tank.

![Tank and AB](image)

- a. 12.1 ft.
- b. 21.9 ft.
- c. 11.1 ft.
- d. 5.6 ft.

16. Identify the diameter for circle $O$.

![Circle O with diameter](image)

17. Given $RP = 22$, $RA = 6$, and $PQ$ is tangent to $O$ at $Q$. Find $PQ$.

![Tangent PQ](image)

18. In the diagram, $RS$ is a radius of circle $R$. Is $ST$ tangent to circle $R$? Explain.

![Circle R with ST](image)

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

![Clock](image)

- a. $105^\circ$
- b. $140^\circ$
- c. $175^\circ$
- d. $210^\circ$

20. Find the measure of $DBC$ in $O$.

![Circle O with DBC](image)
21. Given $\overline{AC}$ bisects $\overline{BD}$, choose the true statement that refers to the figure.

![Diagram with points A, B, C, D, and O]

a. $\overline{CD} = \overline{BA}$
b. $\overline{BCD}$ is a major arc.
c. $\overline{AC}$ is a diameter.
d. $\overline{BAD}$ is a minor arc.

22. Find the value of $x$ to the nearest tenth.