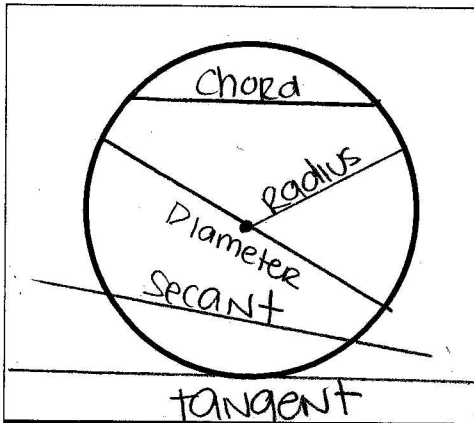


CHAPTER 9 – CIRCLES

NOTES SECTION 9.1: BASIC TERMS



CIRCLE
 A circle is the set of all points in a plane at a given distance from a given point in that plane.
 The given pt. is the center & the given distance is the radius.

RADIUS
 any segment that joins the center to a pt. on the circle. (all radii are congruent.)

CHORD
 a segment whose endpoints lie on a circle

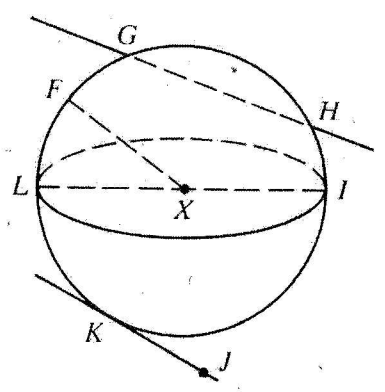
SECANT
 a line that contains a chord.

DIAMETER
 a chord that contains the center of a circle

TANGENT
 a line in the plane of a circle that intersects the circle in exactly one pt., called the pt. of tangency.

SPHERE
 A sphere with center O and radius r is the set of all points in space at a distance r from point O .

center: X
 radii: $\overline{XL}, \overline{XF}, \overline{XI}$
 chords: $\overline{GH}, \overline{LI}$
 diameter: \overline{LI}
 secants: $\overleftrightarrow{GH}, \overleftrightarrow{LI}$
 tangent: \overleftrightarrow{KJ}
 point of tangency: K

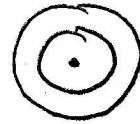


CONGRUENT CIRCLES/SPHERES

Have \cong radii

CONCENTRIC CIRCLES

Circles that lie in the same plane & have the same center.

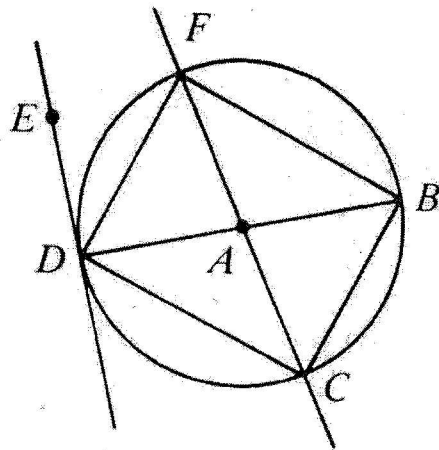
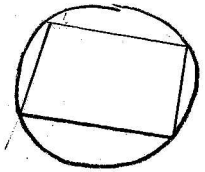
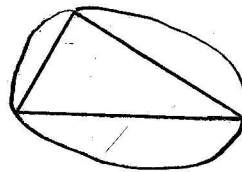


CONCENTRIC SPHERES

have the same center.

INSCRIBED POLYGON/CIRCUMSCRIBED CIRCLE

A polygon is inscribed in a circle & the circle is circumscribed about the polygon when each vertex of the polygon lies on the circle.



In $\odot A$, name:

1. the center A

3. a point of tangency D

5. a tangent \overleftrightarrow{DE}

7. six chords $\overline{BF}, \overline{BC}, \overline{CD}, \overline{DF}, \overline{CF}, \overline{BD}$

8. Why is \overline{AC} not a chord of $\odot A$? A IS NOT ON $\odot A$

9. Why is \overline{BD} not a chord of $\odot A$? \overleftrightarrow{BD} IS NOT a segment

2. two diameters $\overline{BD}, \overline{CF}$

4. four radii $\overline{AB}, \overline{AC}, \overline{AD}, \overline{AF}$

6. a secant \overleftrightarrow{CF}