Name: $\qquad$
Date: $\qquad$ Period: $\qquad$

1. Using the diagram to the right, name objects that meet the description.
a. Chords $\qquad$ , $\qquad$
$\qquad$ b. Radii $\qquad$ , $\qquad$ ,
d. Exterior Points $\qquad$ , ,

2. Jeff wonders if radii and diameters of circles are chords. Are they? Explain.

## 3. A textbook had the following true and false question.

Two radii always form a diameter.
T or $F$
The answer is false.
a) Can you find the counter example to this statement to establish it be false.
b) Most of students put true. What makes this statement confusing?

## 4. Draw the following relationships.

a) Tangent line $\overrightarrow{G E}$ has a point of
b) Secant line $\overleftrightarrow{H T}$ intersects tangency at Point F on Circle $M$.
tangent line $\overleftrightarrow{J T}$ on Circle R.
c) Radius $\overline{A B}$ intersects tangent line $\overleftrightarrow{G E}$ on circle $A$.

5. Solve for the radius of the circle below.
$r=$ $\qquad$

6. Determine whether the arc described is a Major, Minor or Semi-Circle.
a) From D to I counter-clockwise
b) From C to A counter-clockwise
c) From F to J clockwise

d) From G to I counter-clockwise $\qquad$
7. The teacher asks a student to write the name for the arc from $A$ to $B$ on the board. Jackie comes up writes $\overparen{A B}$ or $\overparen{B A}$. Jeff raises his hand and says that he has a different answer. What might his answer be if it is different than Jackie's?

8. Given Circle B with diameters $\overline{H C}, \overline{E G}$ and $\overline{D A}$.
a) $\mathrm{m} \angle \mathrm{DBH}=$
b) $m \overparen{D C E}=$
c) $m \overparen{H G}=$
d) $m \overparen{H C F}=$
e) $m \angle \mathrm{HBA}=$
f) $m \angle D B A=$

9. Determine the missing information. Given concentric circles with $m \overparen{B C}=31^{\circ}, \mathrm{m} \angle \mathrm{FKJ}=68^{\circ}$ and $\overline{E B}$ is a diameter.
$m \overparen{E D}=$
$\mathrm{m} \angle \mathrm{GKH}=$
$m \widehat{A B D}=$.

10. Given the regular octagon below, determine:
a) $m \angle A P B=$
b) $\mathrm{m} \angle \mathrm{HPF}=$
c) $m \overparen{A E}=$
d) $m \widehat{G E A}=$
e) $m \angle$ GPF $=$
f) $\mathrm{m} \angle \mathrm{PAH}=$
g) $\mathrm{m} \angle \mathrm{PGE}=$
h) If HD is $12, \mathrm{GE}=$


