GEO: Unit 10 ~ 10.5 inv

Name: _____

1. Calculate the measure of each lettered angle.

b:_____

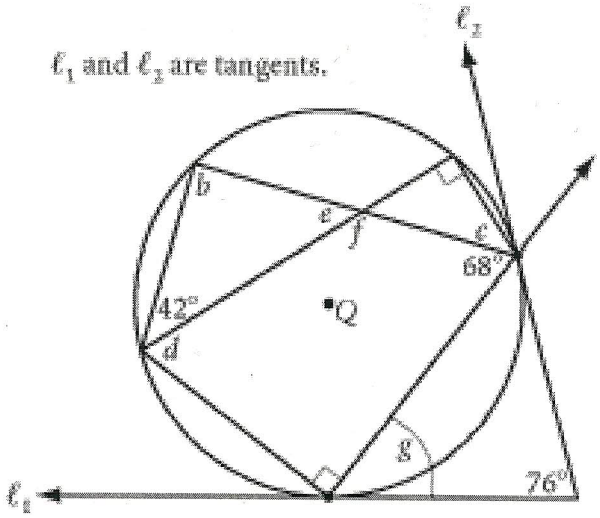
c:_____

d:_____

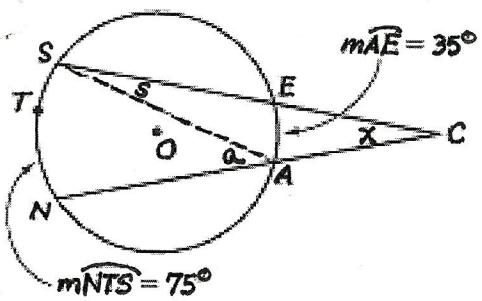
e:_____

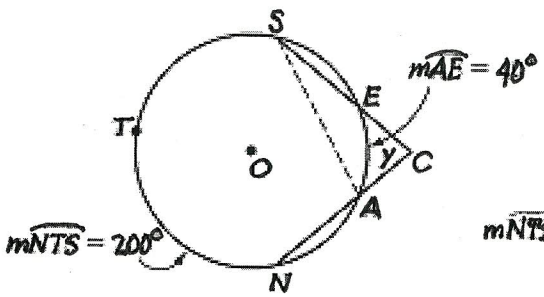
f:_____

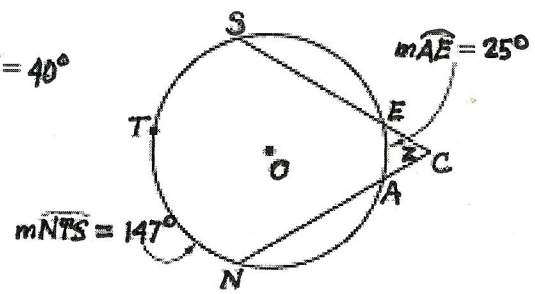
g: _____



2. *Mini-investigation* Use what you know about inscribed angles and exterior angles of a triangle to find the missing angle measures in each diagram. Examine these cases to find a relationship between the measure of the angle formed by two intersecting secants, $< ECA$, and the measures of the two intercepted arcs, $\overset{\frown}{NTS}$ and $\overset{\frown}{AE}$.

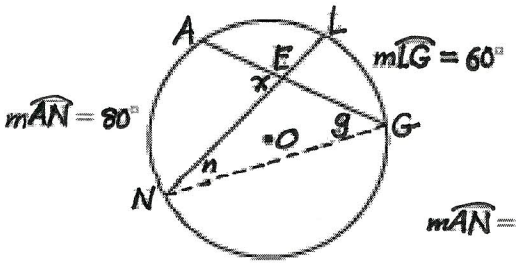


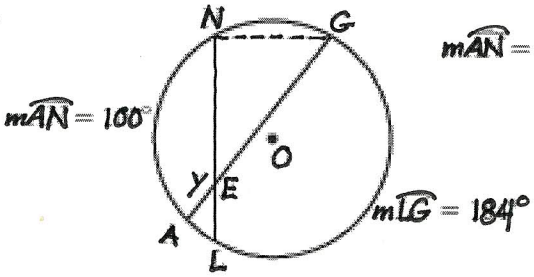


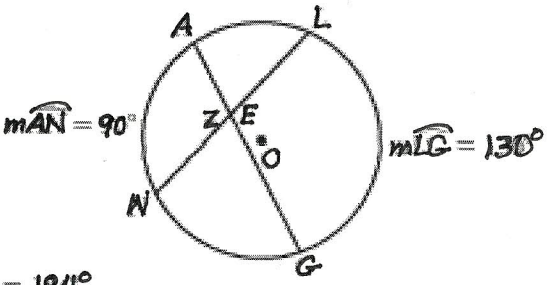


Intersecting Secants *Theorem:* The measure of an angle formed by two secants that intersect outside a circle is …

3.) Mini-investigation Use what you know about inscribed angles and exterior angles of a triangle to find the missing angle measures in each diagram. Examine these cases to find a relationship between the measure of $< AEN$ and the measures of the two intercepted arcs, $\overset{\frown}{AN}$ and $\overset{\frown}{LG}$.







Intersecting Chords *Theorem :* The measure of an angle formed by two intersecting chords is …

4. Developing Proof Prove the conjecture: If two circles intersect at two points, then the segment connecting the centers is the perpendicular bisector of the common chord, the segment connecting the points of intersection.

Given: Circle M and circle S intersect at point A and T with radii $\overline{MA} \cong \overline{MT}$ *and* $\overline{SA} \cong \overline{ST}$
Show: $\overline{MS}$ is the perpendicular bisector of $\overline{AT}$.