8.10

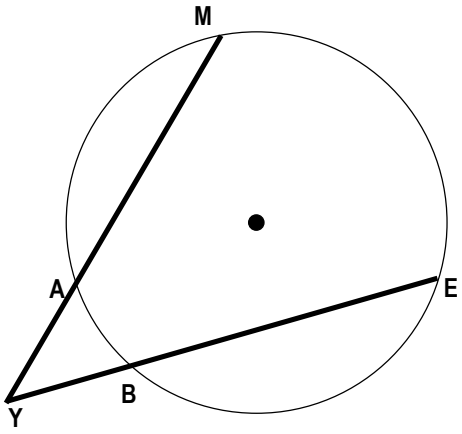
Name (print first and last) _____ **Per**_____ **Date:** 4/7 due 4/8

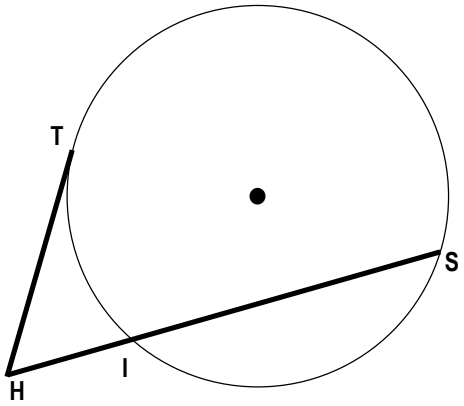
8.10 Segment Lengths: Secants and Tangents **Geometry Regents 2013-2014 Ms. Lomac**

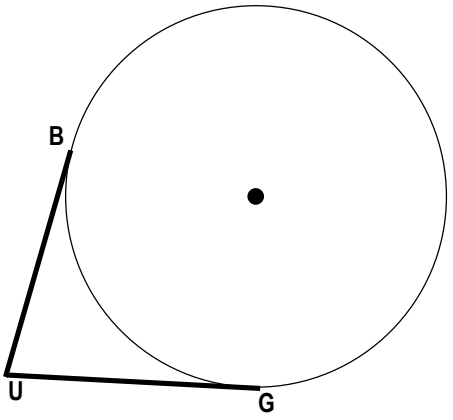
SLO: I can solve problems involving Secants and Tangents.

(1) ☐ Use the website link for lesson 8.10 to help you learn how similar triangles make it possible for us to find the measure of segments of intersecting secants and tangents. Start by stating whether the diagram illustrates secants, tangents, or one secant and one tangent.

(1st)_____ (2nd)_____ (3rd)_____







REDRAW ↓ REDRAW ↓

Proportion:_____ Proportion:_____ Equation:_____

☐ (a) Make clear points where the segments intersect the circle on all 3 diagrams. You should mark a total of 9 points for the 3 diagrams combined.

☐ (b) On the 1st diagram, connect the points so that you have 2 triangles that partially overlap. (Like this  Not this )

☐ (c) Highlight the two triangles with different colors. Mark any angles that you know are congruent because of the reflexive property OR because they are inscribed angles that intercept the same arc.

☐ (d) Because you found 2 pairs of congruent angles, the triangles are _____.

☐ (e) Redraw the triangles separately. Label everything you know.

☐ (f) Write a proportion with ratios of corresponding sides of the triangles. Be sure to only use segments that were part of the original diagram

(2) ☐ Repeat the process of 1b through 1f again with the 2nd diagram. (for step b, Like this  Not this )

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(3) ☐ For the third diagram, label the center Y. Draw radii, YB and YG. Draw segment YU. Use the two triangles to prove the relationship between $\overline{UB}$ and $\overline{UG}$

_____

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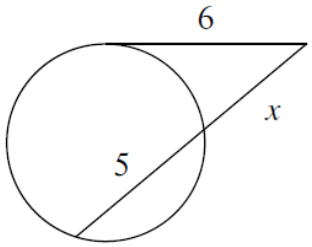
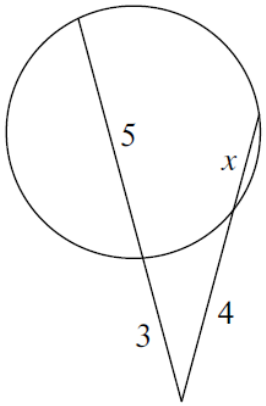
(4) ☐ Find the variable or the indicated segment measure. *** Highlighting segments can be helpful.

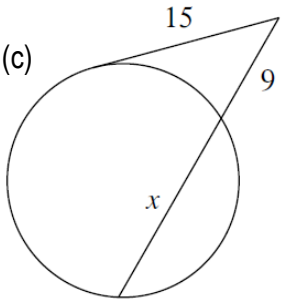
☐ (a)



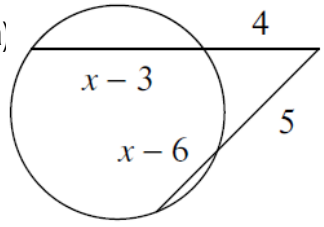
☐ (b)



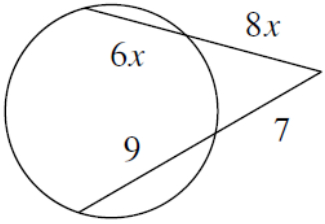
☐ (c)



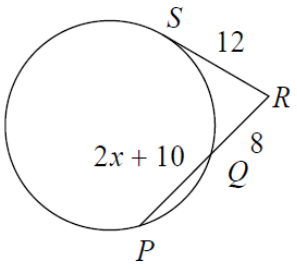
☐ (a)



☐ (b)



☐ (c) Find RP



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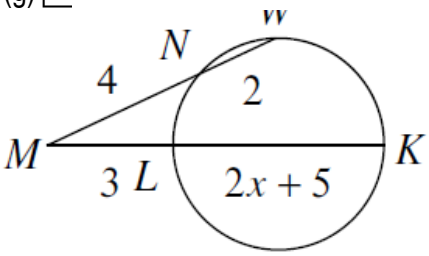
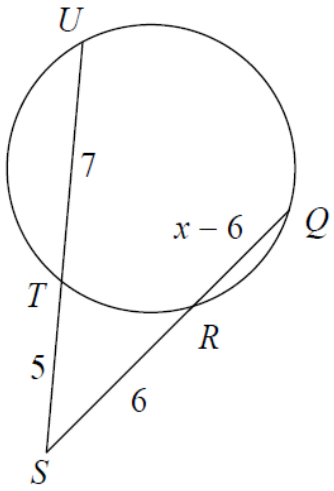
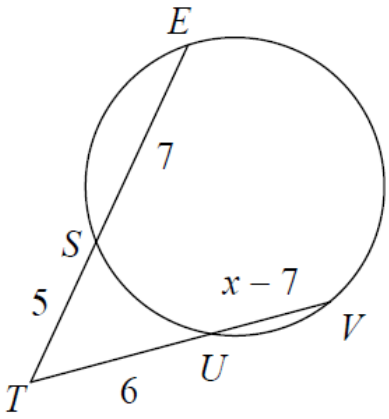
(g) ☐ Find KM



(h) ☐ Find QS



(i) ☐ Find VT



(j) ☐ Find HG