

8.2

Name (print first and last) _____

Per _____ Date: 3/26 due 3/27

8.2 Circles: Angle and arc measures with inscribed angles

Geometry Regents 2013-2014 Ms. Lomac

SLO: I can solve problems involving inscribed angles and intercepted arcs.

(1) Copy the term and description below onto your notes page.

Term: **Inscribed Angles** ($\angle BDC$)

Description: An angle formed by 3 points on a circle, one of which is the vertex of the angle.

(2) Each pair needs: (If you don't have access to these materials, search online to find the relationship between an inscribed angle and the arc it intercepts.)

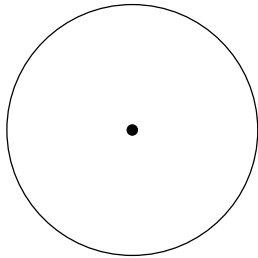
(1) a set of 3 diagrams, diagram X, Y, and Z,

(2) a set of angle cutouts which includes 4 pink pieces, 1 purple piece, 4 dull green pieces, 4 tan pieces, 4 bright green pieces, 4 yellow arcs, and 1 blue and 1 orange triangle, and

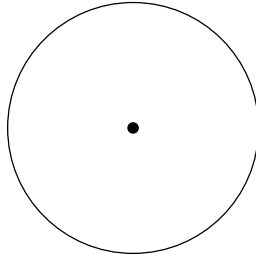
Use these materials to complete the observations and proof page on the back of this packet.

(3) Complete a sketch for each example. Be sure to label the arc measure, the central angle measure, and the inscribed angle measure.

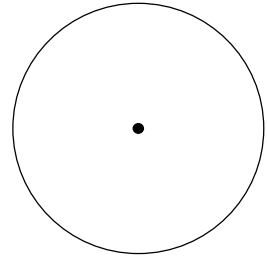
a) An intercepted arc measures 50° . Therefore, the central angle measures _____ and the inscribed angle measures _____



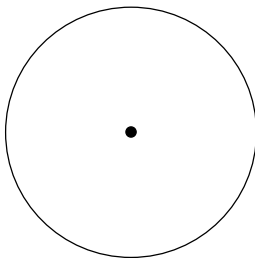
b) A central angle measures 88° . Therefore, the intercepted arc measures _____ and the inscribed angle measures _____



c) An inscribed angle measures 88° . Therefore, the intercepted arc measures _____ and the central angle measures _____



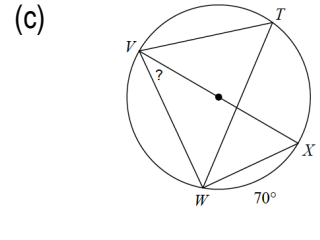
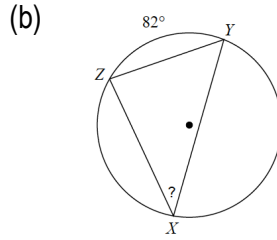
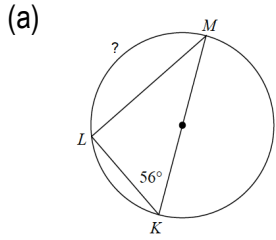
Write a sentence that summarizes the relationship between the measure of an **inscribed angle** a **central angle** and the **arc** that both angles intercept. Include a labeled diagram and an equation showing the relationship.



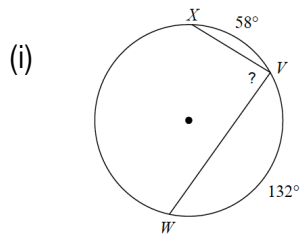
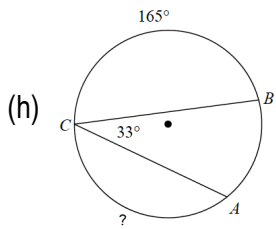
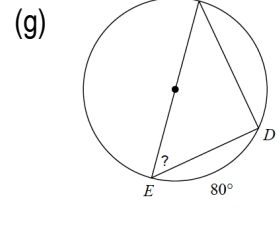
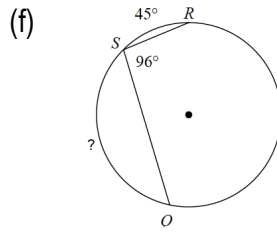
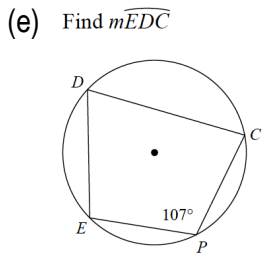
Equation: _____

8.2

(4) Find the indicated measure for each diagram. *** Highlighting arcs and angles can be helpful.

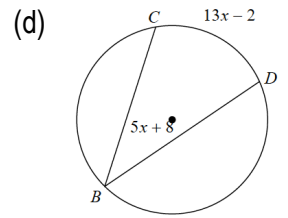
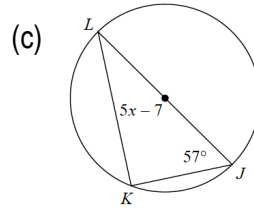
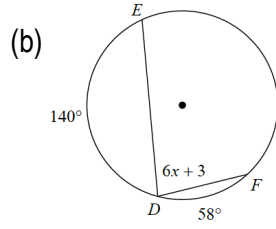
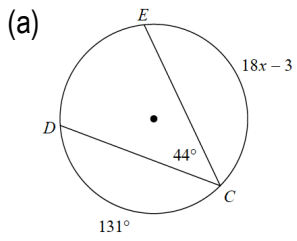


?



8.2

(5) Solve for x .



(6) Find the measure of the arc or angle indicated.

