LEARNING AS ONE NATION
Expanded Project

Math 10_Q2_13

JHS LEARNING ACTIVITY

Name: _____ **Grade/Score:** _____
Grade and Section: _____ **Date:** _____
Subject *(Check or choose from below.)*

- ☐ Religion/Values Education
- ☐ Natural Sciences
- ☐ Araling Panlipunan
- ☐ Filipino
- ☐ English
- ☐ Math
- ☐ TLE / ICT
- ☐ MAPEH
- ☐ HGP _____

Type of Activity *(Check or choose from below.)*_____

- ☐ Concept Notes
- ☐ Skills: Exercise / Drill
- ☐ Performance Task
- ☐ Illustration
- ☐ Formal Theme
- ☐ Informal Theme
- ☐ Others: _____

Activity Title: Circles: Angles Formed by Secants

Learning Target: To identify the measures of angles formed by intersecting secants.

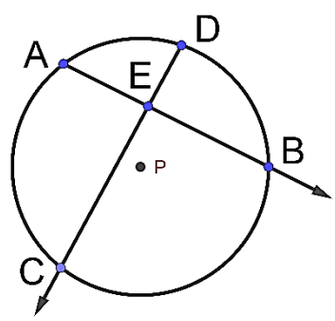
References: *(Author, Title, Pages)*
J.P. Mercado, et.al., Geometry (Next Century Mathematics), p.460
R. Cruel, CVIF Learning Activities

Theorem

If two secants intersect in the interior of a circle, then the measure of the angle formed is equal to one-half of the sum of the measures of the intercepted arcs.

Example:

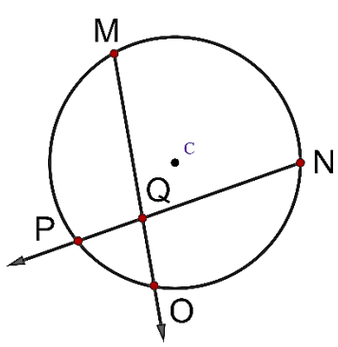
From the given figure, $m\widehat{AC} = 80°$ and $m\widehat{DB} = 40°$, find $m\angle AEC$.



Solution:

$$m\angle AEC = \frac{1}{2}(m\widehat{AC} + m\widehat{DB})$$
$$= \frac{1}{2}(80° + 40°)$$
$$m\angle AEC = 60°$$

Exercises:



Point C is the center of the circle. Secants $\overleftrightarrow{MO}$ and $\overleftrightarrow{PN}$ intersect at point Q.

Answer the following using the figure above.

1) If $m\widehat{NO} = 100°$ and $m\widehat{MP} = 110°$, find $m\angle MQP$.
2) If $m\widehat{MN} = 85°$ and $m\widehat{PO} = 60°$, find $m\angle PQO$.

Skills: From the example above, what is the measure of $\angle BEC$? Justify your answer.