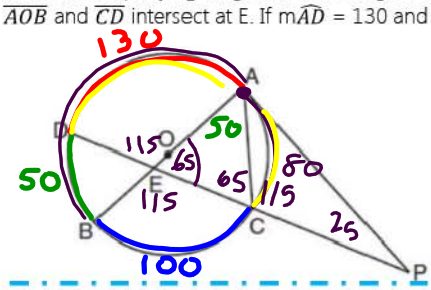
Geometry CC – Mr. Valentino
Unit 12 Day 7: Super Circles Day 1

Name: _____
Date: _____ Per: _____

Aim: How can we solve "Super Circles?"

Do Now:
In the accompanying diagram, $\overline{PA}$ is tangent to circle O at A, chord $\overline{AC}$ and secant $\overline{PCED}$ are drawn, and chords $\overline{AOB}$ and $\overline{CD}$ intersect at E. If $m\widehat{AD}$ = 130 and m∠BAC = 50 find:



m∠P = $\frac{130-80}{2} = \frac{50}{2} = 25$

m∠BEC = 115° ← $\frac{130+100}{2}$

m∠PCA = 115°

SUPER CIRCLES – Woah!

1. In the diagram, isosceles triangle ABC is inscribed in circle O, and vertex angle BAC measures 40°. Tangent $\overline{PC}$, secant $\overline{PBA}$ and diameters $\overline{BD}$ and $\overline{AE}$ are drawn. Find:

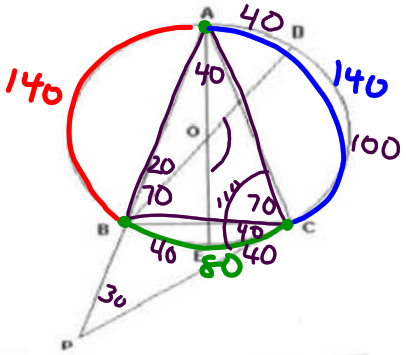
a. $m\widehat{BC}$ = 80

b. m∠ABD = 20

c. m∠DOE = $\frac{140+140}{2} = 140$

d. m∠P = 30°

e. m∠ACP = 110



2. Circle O with tangent $\overline{DE}$ and $m\widehat{BC} : m\widehat{CD} : m\widehat{AD} : m\widehat{AB} = 7:8:12:9$
Find all of the numbered angles.

1 =
2 =
3 =
4 =
5 =
6 =
7 =
8 =
9 =
10 =
11 =
12 =