Name: _____   Date: _____
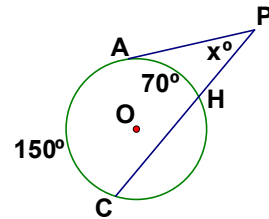Mr. Schlansky   Geometry

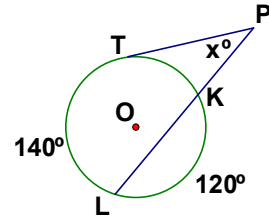# *Exterior Angles in Circles*

1. Major arc AB = 200º, Minor arc AB = 160º, find m ∠ APB
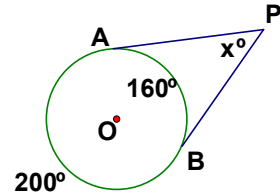
2. AC = 150º, AH = 70º, find m ∠ APH

3. TL = 140º, LK = 120º, find m ∠ TPK

4. TN = 50º, ∠ TPN = 20º, find AS

5. SC = 180º, ∠ SPA = 30º, find AS
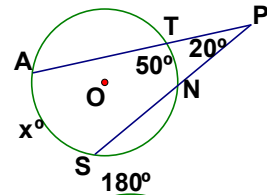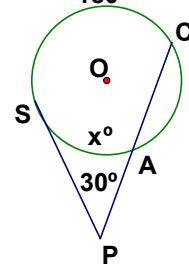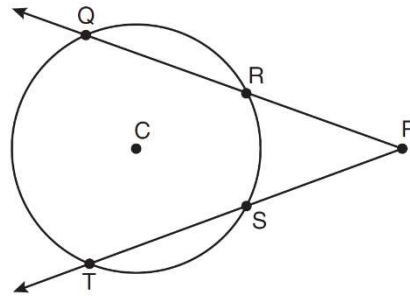
6. ∠ KPE = 60º, find major arc KE
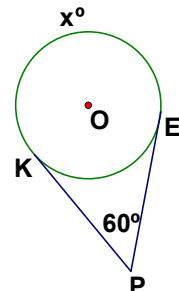
7. Tangents $\overline{PA}$ and $\overline{PB}$ are drawn to circle O from an external point, P, and radii $\overline{OA}$ and $\overline{OB}$ are drawn. If $m\angle APB = 40$, what is the measure of $\angle AOB$?
1) 140°
2) 100°
3) 70°
4) 50°

8. In the diagram below of circle C, $m\overset{\frown}{QT} = 140$, and $m\angle P = 40$.

What is $m\overset{\frown}{RS}$?
1) 50
2) 60
3) 90
4) 110

9. In the diagram below, tangent $\overline{ML}$ and secant $\overline{MNK}$ are drawn to circle O. The ratio $m\overset{\frown}{LN} : m\overset{\frown}{NK} : m\overset{\frown}{KL}$ is $3:4:5$. Find $m\angle LMK$.