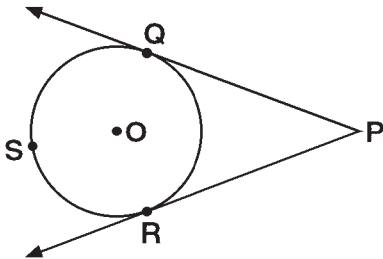


Name: \_\_\_\_\_

CC Geometry Homework

Angles Formed by Tangents and Secants

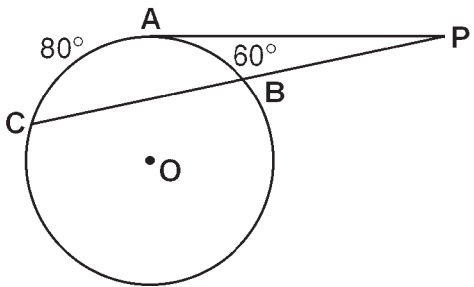
- 1) Tangents  $\overrightarrow{PQ}$  and  $\overrightarrow{PR}$  are drawn to circle  $O$  from point  $P$  in the figure below.



If  $m\widehat{QR} = 127^\circ$ , what is  $m\angle P$ ?

- A)  $63.5^\circ$                       C)  $127^\circ$   
 B)  $53^\circ$                          D)  $106^\circ$

- 2) In the accompanying diagram, tangent  $\overrightarrow{PA}$  and secant  $\overrightarrow{PBC}$  are drawn to circle  $O$  from point  $P$ .

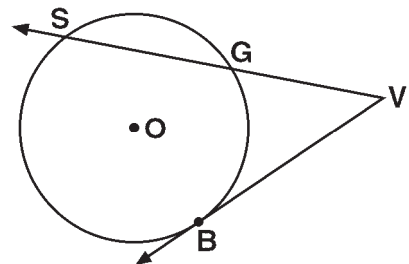


If  $m\widehat{AC} = 80^\circ$  and  $m\widehat{AB} = 60^\circ$ , what is the measure of  $\angle P$ ?

- A)  $60^\circ$                             C)  $10^\circ$   
 B)  $20^\circ$                             D)  $70^\circ$

Questions 3 and 4 refer to the following:

In the diagram below, secant  $\overrightarrow{VS}$  and tangent  $\overrightarrow{VB}$  are drawn to circle  $O$ .



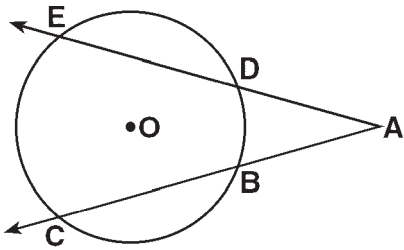
- 3) If  $m\widehat{SB} = 200^\circ$  and  $m\widehat{GB} = 72^\circ$ , what is  $m\angle V$ ?

- A)  $128^\circ$                             C)  $72^\circ$   
 B)  $136^\circ$                             D)  $64^\circ$

- 4) If  $m\widehat{SG} = 100^\circ$  and  $m\widehat{GB} = 50^\circ$ , what is  $m\angle V$ ?

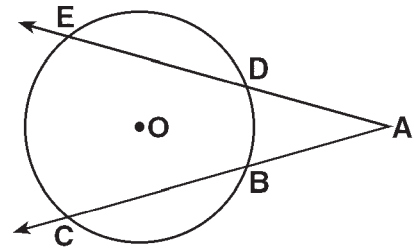
- A)  $55^\circ$                                 C)  $80^\circ$   
 B)  $160^\circ$                             D)  $105^\circ$

- 5) In the diagram below,  $\overline{AE}$  and  $\overline{AC}$  are secants to circle  $O$  from point  $A$ .



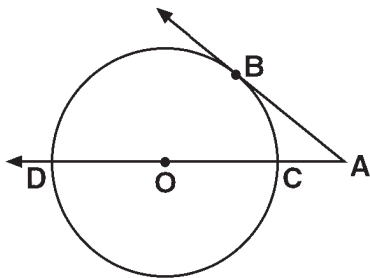
If  $m\angle A = 35^\circ$  and  $m\widehat{EC} = 125^\circ$ , find  $m\widehat{DB}$ . [Show all work.]

- 7) In the diagram below,  $\overline{AE}$  and  $\overline{AC}$  are secants to circle  $O$  from point  $A$ .



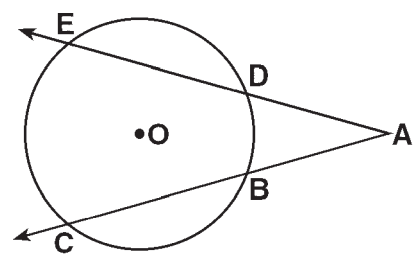
If  $m\widehat{EC} = 120^\circ$  and  $m\widehat{DB} = 60^\circ$ , find  $m\angle A$ . [Show all work.]

- 6) In the diagram above, tangent  $\overline{AB}$  and secant  $\overline{AD}$  are drawn to circle  $O$ .



If  $m\widehat{DB} = 150^\circ$ , what is  $m\angle A$ ?

- 8) In the diagram below,  $\overline{AE}$  and  $\overline{AC}$  are secants to circle  $O$  from point  $A$ .



If  $m\angle A = 20^\circ$  and  $m\widehat{DB} = 60^\circ$ , find  $m\widehat{EC}$ . [Show all work.]