

Name:

### 9.6 Homework: Circle angles

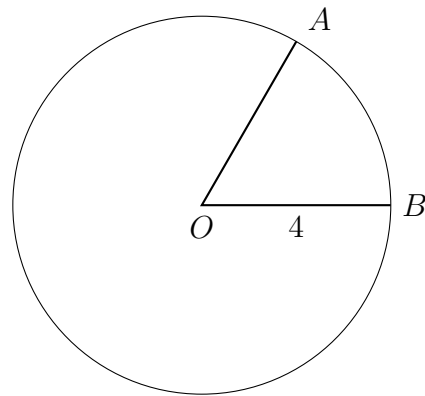
1. Write down the formula for the circumference of a circle given the radius.
2. Write down the formula for the area of a circle.
3. Given circle  $O$  with radius  $OB = 4$ .

(a) Find the circumference of circle  $O$ .

(b) Find its area.

(c) Given that  $m\angle AOB = 60^\circ$ , find  $m\widehat{AB}$ .

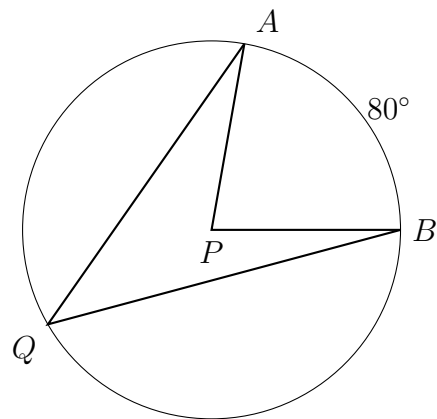
(d) Find the area of the sector  $AOB$ .



4. Given circle  $P$  with  $m\widehat{AB} = 80^\circ$ .

(a) Write down the  $m\angle APB$ .

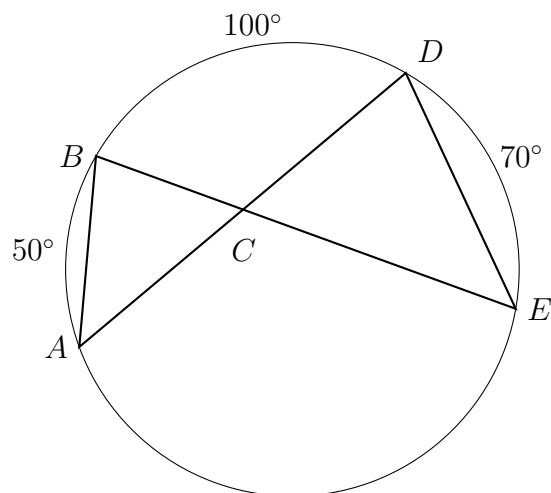
(b) Find the  $m\angle AQB$ .



5. Given circle  $O$  with chords  $\overline{AD}$  and  $\overline{BE}$  intersecting at  $C$ , as shown in the diagram. Given  $m\widehat{AB} = 50^\circ$ ,  $m\widehat{BD} = 100^\circ$ , and  $m\widehat{DE} = 70^\circ$ .

(a) Find the  $m\angle BAD$ .

(b) Find the  $m\angle ACB$ .



6. The secants  $\overline{ABC}$  and  $\overline{ADE}$  intersect the circle  $O$ , as shown in the diagram. Given  $m\widehat{BD} = 30^\circ$  and  $m\widehat{CE} = 140^\circ$ .

(a) Find the  $m\angle CDE$ .

(b) Find the  $m\angle BCD$ .

(c) Find the  $m\angle A$ .

