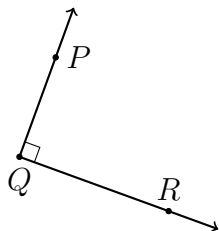


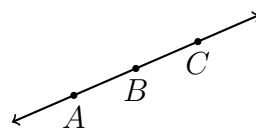
## 7.9 Angle review

1. The size of an angle is its “measure,” which can be from  $0^\circ$  to  $360^\circ$

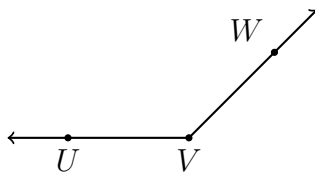
(a) What is the degree measure of the angle,  $m\angle PQR$ ?



(b) What is the degree measure made by these two opposite rays,  $\overrightarrow{BA}$  and  $\overrightarrow{BC}$ ?



(c) The given angle  $\angle UVW$  is which of the following: acute, obtuse, or right?

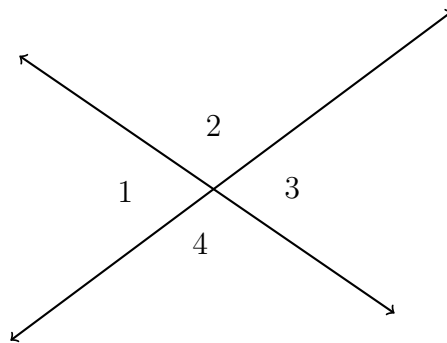


2. As shown below, two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ .

Given  $m\angle 2 = 110^\circ$ .

(a) Find  $m\angle 3$

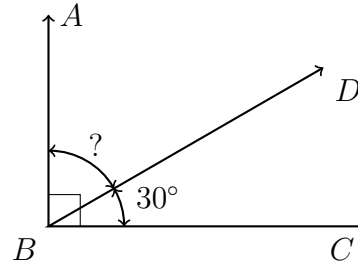
(b) Find  $m\angle 4$



3. Apply the Angle Addition postulate. Write an equation to support your work.

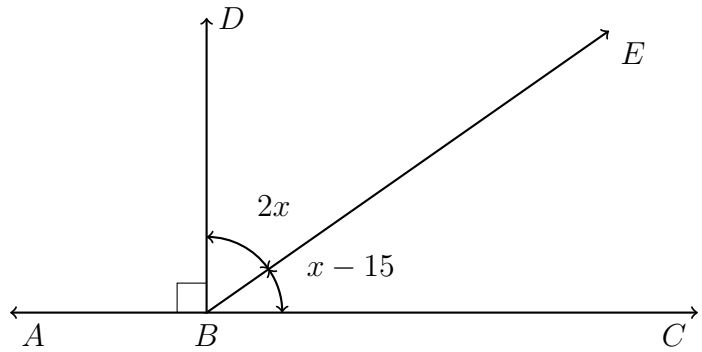
Given  $m\angle CBD = 30^\circ$ ,  $m\angle ABC = 90^\circ$ .

Find  $m\angle ABD$ .



4. Given  $\overrightarrow{BD} \perp \overleftrightarrow{ABC}$ ,  $m\angle DBE = 2x$ , and  $m\angle EBC = x - 15^\circ$ , as shown below.

Write an equation and solve for  $x$ .



5. An equilateral triangle is inscribed in a circle with a radius  $r = 9$ . Find each:

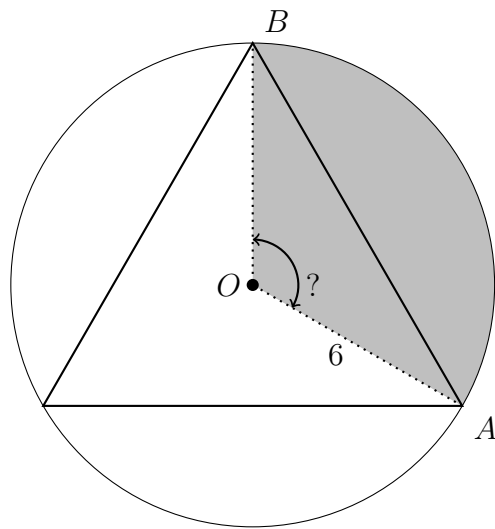
(a)  $m\angle AOB$

(b) The circle circumference. ( $C = 2\pi r$ )

(c) The length of the arc  $\widehat{AB}$

(d) The circle's area. ( $A = \pi r^2$ )

(e) The sector area (in gray)

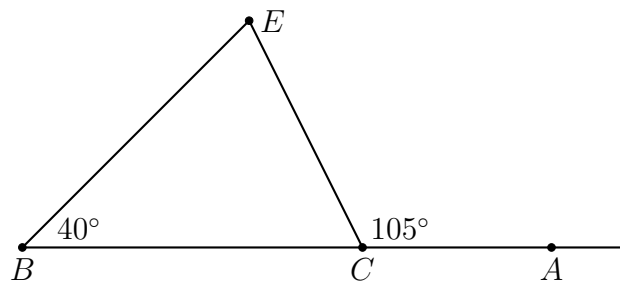


6. Given  $m\angle B = 40^\circ$  and  $m\angle ECA = 105^\circ$ .

- (a) What is the sum of the measures of a triangle's angles? (for example,  $\angle BCE$ ,  $\angle B$ , and  $\angle E$ )

- (b) Find  $m\angle BCE$ .

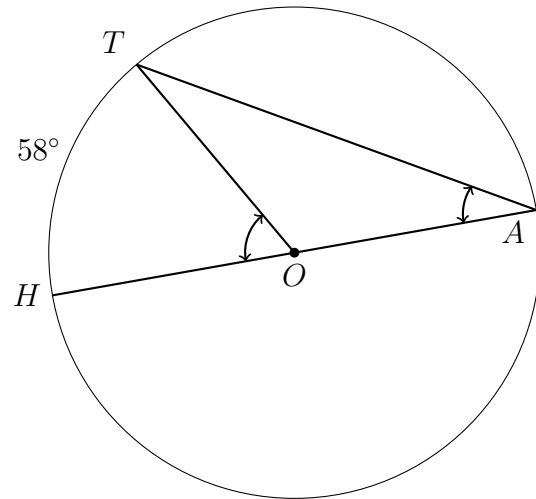
- (c) Find  $m\angle E$ .



7. Given circle  $O$  with  $m\widehat{HT} = 58^\circ$ .

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

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



8. Given circle  $O$ , diameters  $\overline{AC}$  and  $\overline{BD}$ , and arc measure  $m\widehat{BC} = 45^\circ$ .

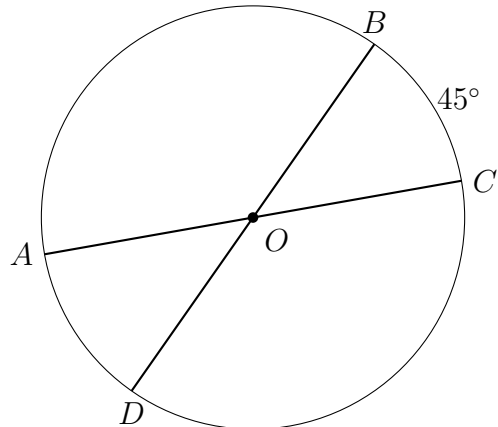
(a) How are  $\angle AOD$  and  $\angle BOC$  related?

- Vertical angles
- Opposite angles
- Complementary angles
- Supplementary angles
- Linear pair

(b) Write down  $m\angle AOD$

(c) Write down  $m\widehat{AD}$ .

(d) Find  $m\widehat{AB}$

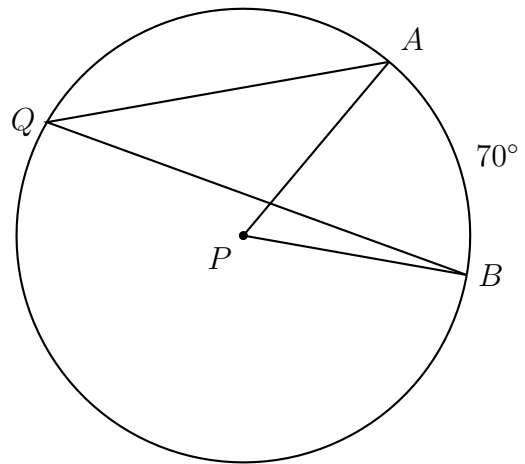




9. Given circle  $P$  with  $m\widehat{AB} = 70^\circ$ .

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

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



10. Ray  $\overrightarrow{BF}$  is the angle bisector of  $\angle ABC$ . Given that the angle measures are  $m\angle ABF = 7x - 14$  and  $m\angle CBF = 5x + 10$ .

Find  $x$  and hence,  $m\angle ABC$ .

