11.1 Classwork: Circle

1. Find the area of a semi-circle with radius of 7 centimeters.

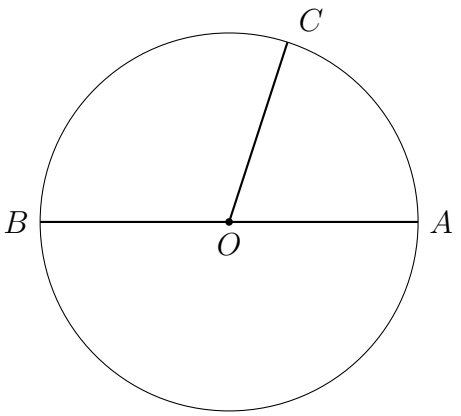
2. Do Now: Circle O has a diameter $AB = 10$, as shown. Given $m\angle AOC = 72°$.

   (a) Find the circumference of circle O.

   (b) Find the area of circle O.

   (c) Find the area of the sector AOC.

   (d) Find the perimeter of sector AOC.



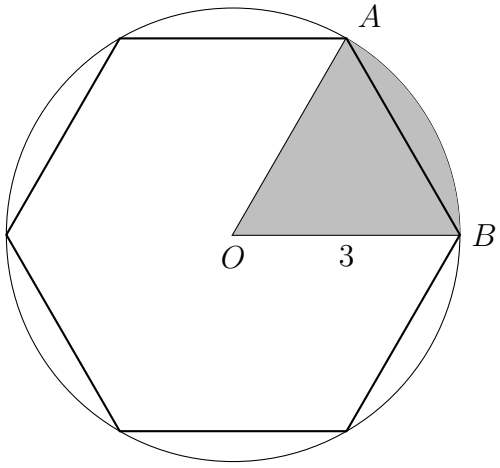
3. Given circle O with radius $OB = 3$ cm.

   (a) Find the circumference of circle O.

   (b) Find the area of the circle.

   (c) A hexagon is inscribed in the circle, with A and B two of its vertices.

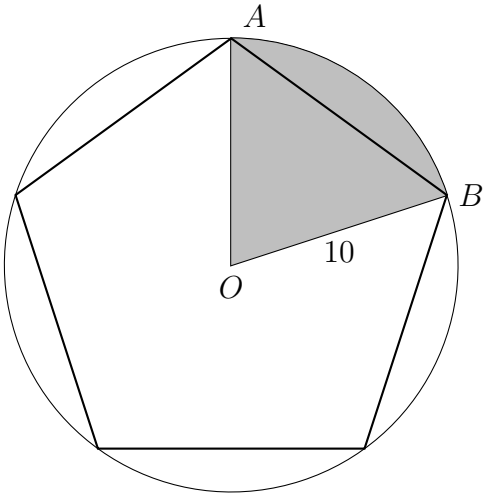
   Find the area of the sector AOB.



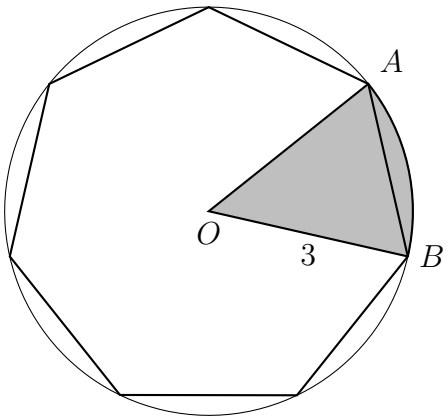
4. A pentagon is inscribed in circle O, as shown below. The circle has radius $r = 10$.

   (a) Find the area of the sector AOB.

   (b) Find the perimeter of the sector AOB.



5. A regular heptagon (7 sides) is inscribed in circle O, having a radius $r = 3$.

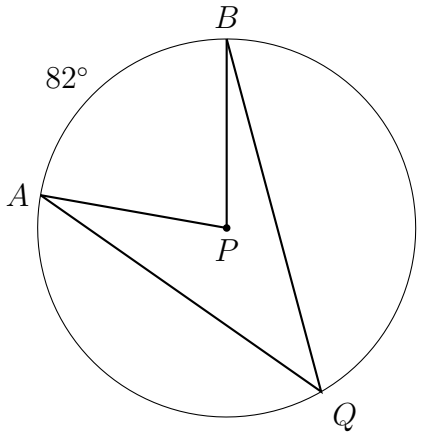


   (a) Find the area of the sector AOB.

   (b) Find the perimeter of sector AOB.

   (c) Find the measure of central angle $\angle AOB$

6. Given the circle with center P with central angle $\angle APB$ and inscribed angle $\angle AQB$. The intercepted arc has a measure $m\widehat{AB} = 82°$.



   (a) Find $m\angle APB =$

   (b) Find $m\angle AQB =$

   Circle True or False:

   i. T F $\overline{AP}$ is a radius

   ii. T F $\overline{AQ}$ is a diameter

   iii. T F $\angle AQB$ is an inscribed angle

7. A regular hexagon (6 sides) is inscribed in circle O, having a radius $r = 3$.

   (a) Find the area of the sector AOB.

   (b) Find the perimeter of sector AOB.

   (c) Find the measure of central angle $\angle AOB$

4