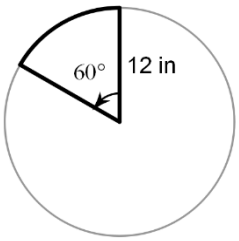
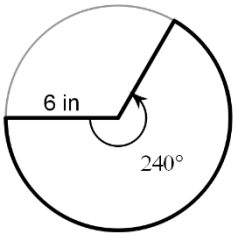
 Name: _____

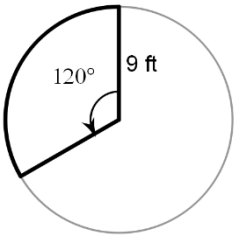
12.3 ~ Sectors & Segments

Past due on: _____ Period: _____

Find the area of the sector shown. Express your answer in terms of π and expressed as a decimal rounded to the nearest hundredth.

1. 

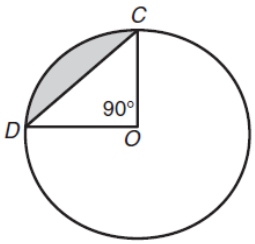
2. 

3. 

Find the area of the shaded segment with the given radius. Express your answer in terms of π and expressed as a decimal rounded to the nearest hundredth.

4. The radius of the circle is 14 inches.

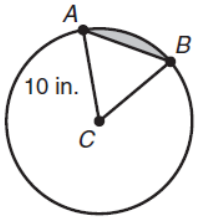
5. The radius of the circle is 17 feet.



6. If the area of the segment is $16\pi - 32$ square feet, what is the length of the radius of the circle with a central angle of 90°?

7. If the area of the segment is $56.25\pi - 112.5$ square feet, what is the length of the radius of the circle with a central angle of 90°?

8. In $\odot C$ shown, $\triangle ABC$ is an equilateral triangle and $AC = 10$ inches.



$m\angle C = 60°$

   a. Calculate the area of sector ACB. Express your answer in terms of π and as a decimal rounded to the nearest hundredth.

   b. The height of $\triangle ABC$ is approximately 8.66 inches. Calculate the area of $\triangle ABC$.

   c. Calculate the area of segment AB of circle C. Express your answer in terms of π and as a decimal rounded to the nearest hundredth.