

Geometry Unit 4

HW: Circles and Segment Area

Name: _____

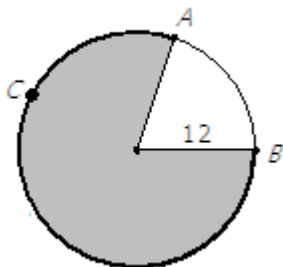
Period: _____ Date: _____

First, use your notes (or memory!) to fill in these formulas:

Formula for Area of a Circle	Formula for Area of a Sector (version you prefer)
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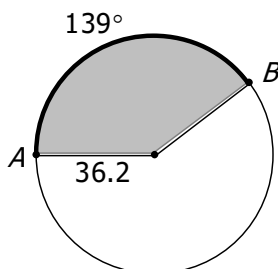
Unless otherwise specified, round answers to 2 decimal places.

1.



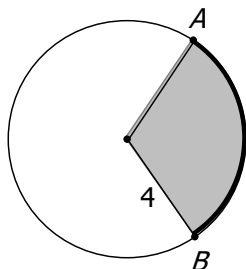
The radius of this circle is 12 inches, and $m\widehat{AB} = 72^\circ$. Find the area of the shaded sector.

2.



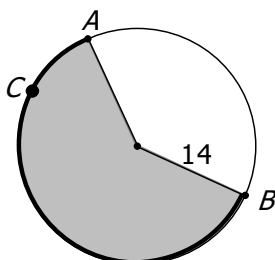
The radius of this circle is 36.2 ft, and $m\widehat{AB} = 139^\circ$. Find the area of the shaded sector.

3.



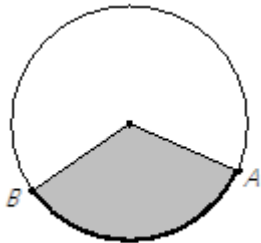
The radius of this circle is 4 inches, and the area of the shaded sector is 5π square inches. Find $m\widehat{AB}$.

4.



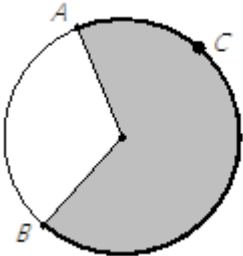
The radius of this circle is 14 meters, and the area of the shaded sector is 376 square meters. Find $m\widehat{ACB}$, in degrees.

5.



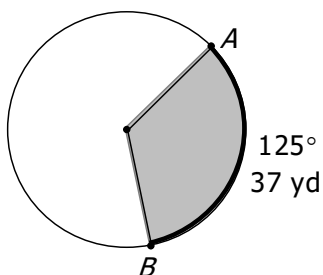
$m\widehat{AB} = 140^\circ$, and the area of the shaded sector is $\frac{1}{2}\pi$ square feet. Find the **exact** radius of the circle and the radius rounded to the nearest hundredth.

6.



$m\widehat{ACB} = 244^\circ$, and the area of the shaded region is 104π cm². Find the radius of the circle.

7.



$m\widehat{AB} = 125^\circ$ and the length of \widehat{AB} is 37 yards. Find the radius of the circle (to the nearest yard), then find the area of the shaded sector (rounded to 2 decimal places).

8.

Sketch a picture:

Farmers often plant fields in circles to allow for equal distribution of water from a central point. A farmer has a circular field with diameter 550 feet and wants to plant 75,000 square feet of soybeans. What should be the central angle of the "soybeans" sector of the field? Round your answer to the nearest degree.