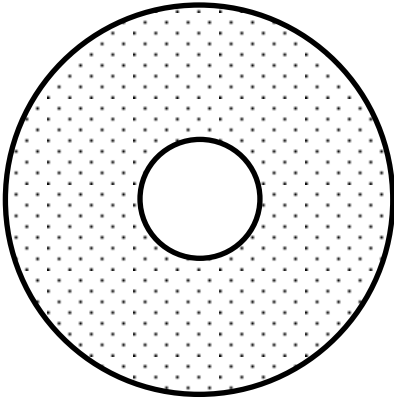


Unit 6: Circles
Day 5 Circles and Sectors (PH 7-7)

Name: _____
Date: _____ **Hour:** ____

Example 1: A circular archery target has a 2-ft diameter. It is yellow except for a red bull's-eye at the center with a 6-in. diameter. Find the area of the yellow region. Round your answer to the nearest whole number.

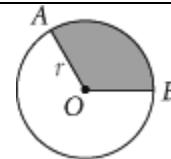


A **sector** of a circle is a region bounded by an arc of the circle and the two radii to the arc's endpoints. You name a sector using one arc endpoint, the center of the circle, and the other arc endpoint. The slice of pizza at the left is sector XOY of a circle O.

Theorem 7-16: Area of a Sector of a Circle

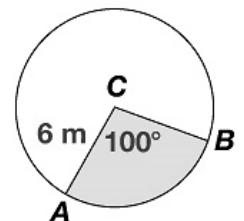
The area of a sector of a circle is the product of the

ratio $\frac{\text{measure of the arc}}{360}$ and the area of the circle.



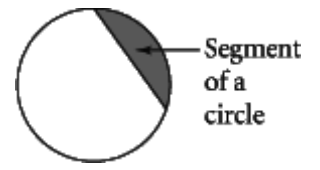
$$\text{Area of sector AOB} = \frac{m\widehat{AB}}{360} \cdot \pi r^2$$

Example 2: Find the area of sector ACB. Leave your answer in terms of π .

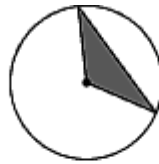


How is finding the area of a sector like finding arc length?

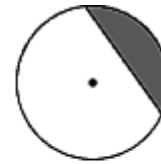
A part of a circle bounded by an arc and the segment joining its endpoints is a **segment of a circle**. To find the area of a segment for a minor arc, draw radii to form a sector.



Area of sector



Area of triangle



Area of segment

$$\text{Area of the segment} = \text{Area of the sector} - \text{Area of the triangle formed}$$

Example 3: Find the area of the shaded segment. Round your answer to the nearest tenth.

