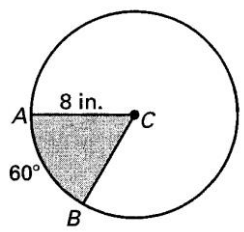
 Name: _____

9.9 – Sectors & Segments of a Circle

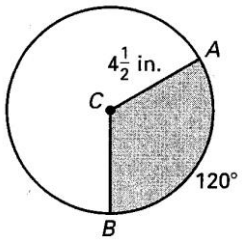
Past due on: _____ Period: _____

Find the areas of the sectors formed by $\angle ACB$. **SHOW ALL WORK.** *Approximate your answer to two decimal places.*

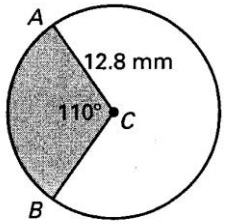
1.



2.

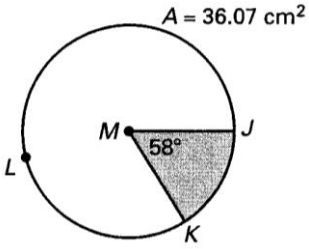


3.

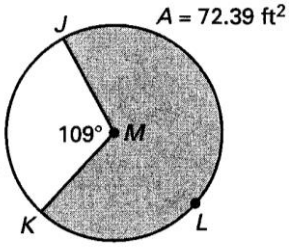


Find the indicated measurement of $\odot M$, given the area of the shaded sector. **SHOW ALL WORK.** *Approximate your answer to two decimal places.*

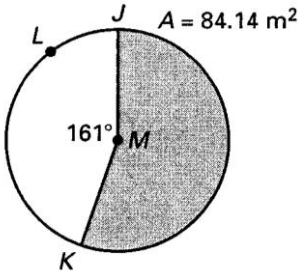
4. Find the area of $\odot M$



5. Find the diameter of $\odot M$

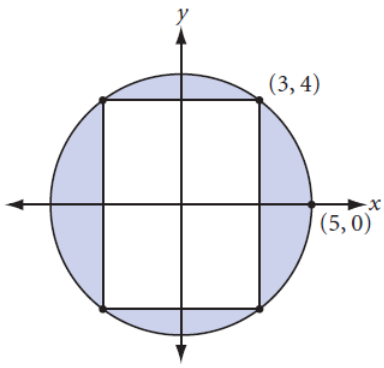


6. Find the radius of $\odot M$

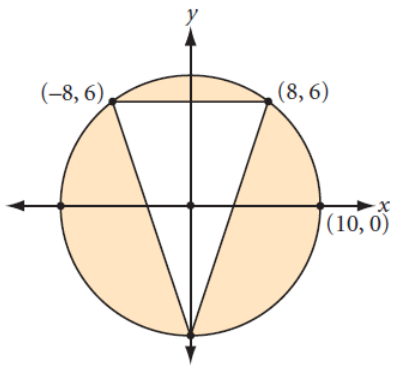


Find the area of the shaded region between the circle and the polygon. **SHOW ALL WORK.** *Approximate your answer to two decimal places.*

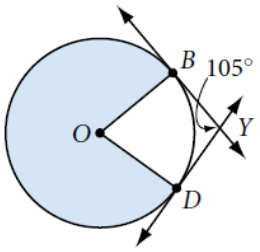
7.



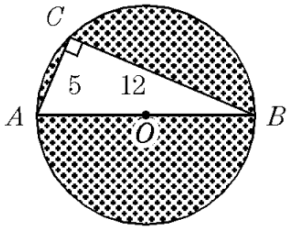
8.



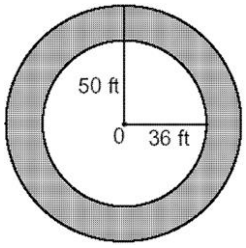
9. $\overleftrightarrow{BY}$ & $\overleftrightarrow{DY}$ are tangent to $\odot O$. $OD = 24$ centimeters. Find the area of the shaded region. *Approximate your answer to two decimal places.*



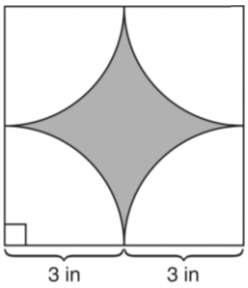
10. $\triangle ABC$ is inscribed in $\odot O$, $AC = 5$, $BC = 12$. Find the area of the shaded region. *Approximate your answer to two decimal places.*



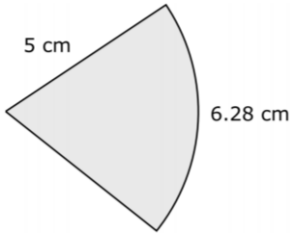
11. If asphalt pavement costs $0.78 per square foot, determine the cost of paving the shaded circular road with center O, an outside radius of 50 feet, and an inner radius of 36 feet.



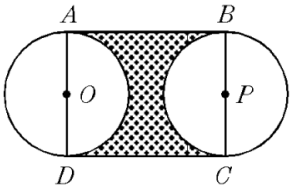
12. A designer created the logo shown below. The logo consists of a square and four quarter-circles of equal size. Express, in terms of π, the exact area of the shaded region.



13. A sector of a circle is shown. What is the area of the sector? (Use 3.14 for π.)



14. The diameters of circles O and P are congruent, $AD = 12$, $ABCD$ is a rectangle, and side $AB = 15$. What is the area of the shaded region? (Express answers in terms of π.)



15. In the figure below, the larger circle has a radius of 6 cm, and the smaller circles has a radius of 2 cm. What is the area of the shaded region? *Approximate your answer to two decimal places.*