

Name _____
Mr. Schlansky

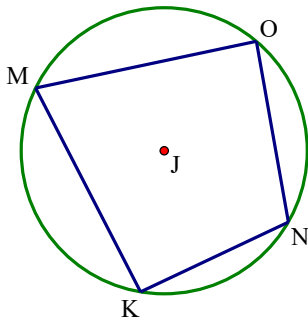
Date _____
Geometry

Circle Review Sheet

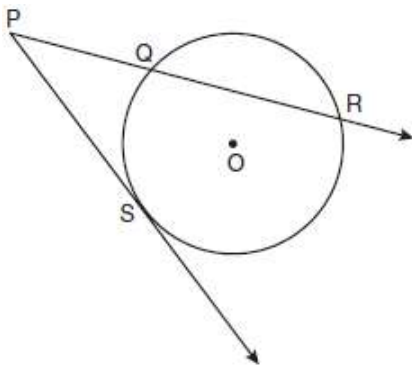
1. Find the center and radius of the circle with the following equation:

$$x^2 + 8y + 10 + y^2 - 4x = 6$$

2. In the diagram below, quadrilateral MONK is inscribed in circle J, $m\angle KMO = 48^\circ$ and $m\angle MON = 80^\circ$. Find the measures of $m\angle KNO$ and $m\angle MKN$.

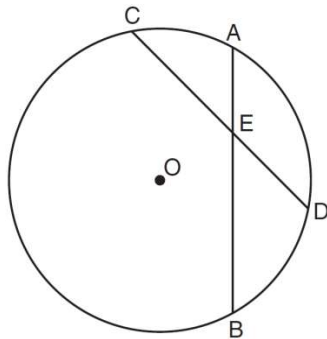


3. In the diagram below, $\overline{PS}$ is a tangent to circle O at point S, $\overline{PQR}$ is a secant, $m\angle QPS = 35^\circ$, $QS = 80$, find $m\widehat{RS}$.



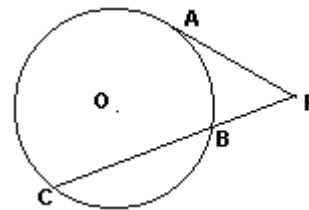
(Not drawn to scale)

4. In the diagram below of circle O , chords $\overline{AB}$ and $\overline{CD}$ intersect at E .



If $m\angle CEB = 110^\circ$ and $m\widehat{AC} = 50$, what is $m\widehat{DB}$?

5. In the diagram, $\overline{AP}$ is a tangent and $\overline{PBC}$ is a secant to circle O . If $\overline{PB} = 2$ and $\overline{BC} = 30$, what is $\overline{AP}$?

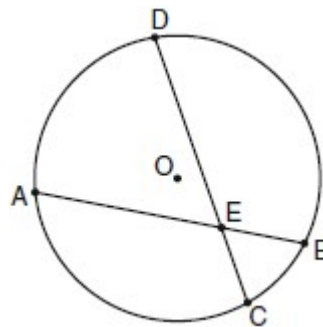


6. In the diagram of circle O below, chord $\overline{AB}$ intersects chord $\overline{CD}$ at E , $DE = 2x + 8$, $EC = 3$, $AE = 4x - 3$, and $EB = 4$.

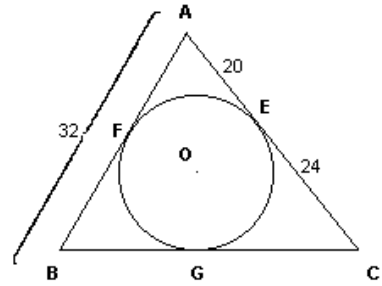
What is the value of x ?

- 1) 1
- 2) 3.6

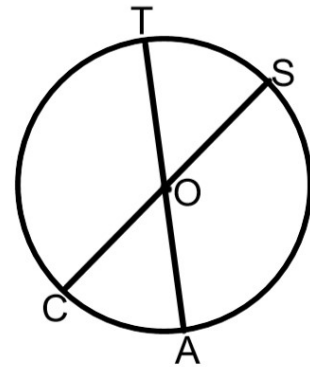
- 3) 5
- 4) 10.25



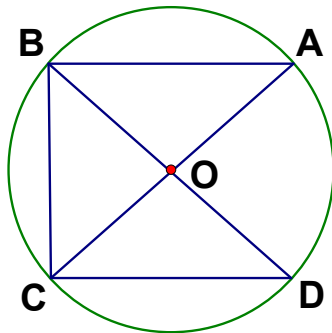
7. In the diagram, $\overline{AFB}$, $\overline{AEC}$, and $\overline{BGC}$ are tangent to circle O at F , E , and G , respectively. If $AB = 32$, $AE = 20$, and $EC = 24$, what is BC ?



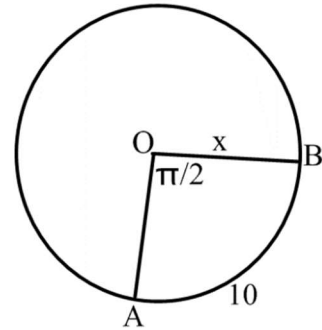
8. In circle O , diameters $\overline{TA}$ and $\overline{CS}$ are drawn. If $m\angle COA = 60$ and $\overline{TA} = 10$ cm, find the area of sector SOA to the nearest hundredth of a square centimeter.



9. In circle O , diameters $\overline{BOD}$ and $\overline{COA}$ intersect at the center of the circle O . If the area of sector $OCD = 240\pi$ square inches and $m\angle AOD = 80$, find the measure of $\overline{OB}$ to the nearest tenth of an inch.



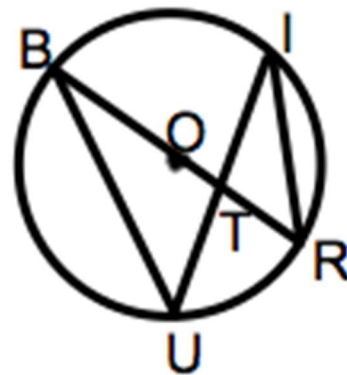
10. In circle O, the measure of central angle AOB is $\frac{\pi}{2}$ radians and the length of arc AB is 10 cm. What is the measure of radius $\overline{OB}$ to the nearest tenth of a cm?



11. In circle O shown below, $\overline{BR}$ is a diameter and chords $\overline{BU}$, $\overline{IU}$, and $\overline{IR}$ are drawn.

Which of the following statements is *not* true?

- 1) $\angle BUI \cong \angle BRI$ 3) $\angle UBT \cong \angle BRI$
 2) $\angle ITR \cong \angle BTU$ 4) $\angle RBU \cong \angle RIU$



12. Given: Circle O with diameters $\overline{MT}$ and $\overline{AH}$.
 Prove: $\overline{MA} \cong \overline{HT}$

