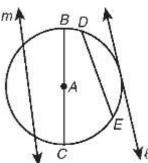
12.1.a Learning Target: Identify tangents, secants, and chords.

1.



Name a chord: \_\_\_\_\_

Name a tangent:

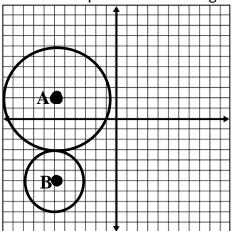
Name a radius: \_\_\_\_\_

Name a secant: \_\_\_\_\_

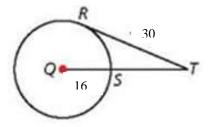
Name a diameter: \_\_\_\_\_

12.1.b Learning Target: Use properties of tangles to solve problems.

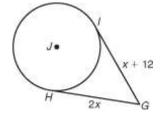
2. Write the equation of the tangent line.



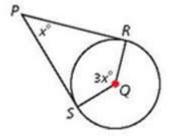
3. Line RT is tangent to circle Q. Find ST.



4. In the diagram below,  $\overline{GH}$  and  $\overline{GI}$  are tangent to  $\odot J$ . Find GH.

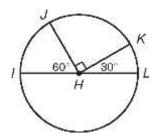


5. Lines PR and PS are tangent to circle Q. Find  $\angle P$ .

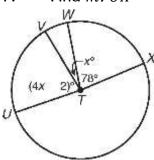


12.2.a Learning Target: Apply properties of arcs.

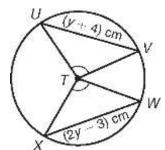
6. Find  $m\widehat{IK}$  and  $m\widehat{JIL}$ .



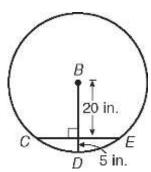
7. Find  $m\widehat{VUX}$ 



8. Find WX.



9. Find CE.

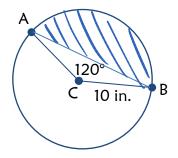


12.3.a Learning Target: Find the area of sectors

10. The central angle of an arc measures 75 degrees. The radius of the circle measures 3 meters. What is the area of the sector?

11. If the area of the sector is  $32\pi$ , with a central angle of  $180^{\circ}$ , find the radius of the circle.

12. Find the area of Segment AB



12.3.b Learning Target: Find arc lengths.

13. An arc measures 125 degrees in a circle with a radius of 36 cm. What is the length of the arc?