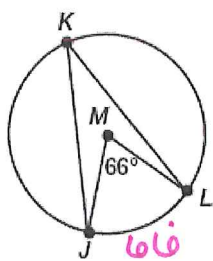


Name: Key

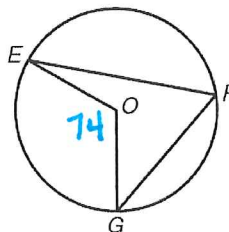
Geometry Extra Review (10.3-10.4) Notes

1. In circle M , $\angle JKL$ is an inscribed angle whose intercepted arc JL measures 66° .



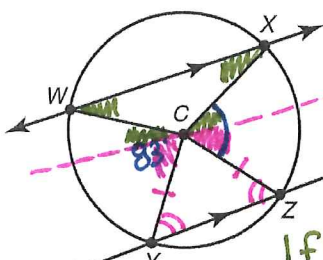
$\angle JKL = \frac{1}{2} 66$
 $\angle JKL = 33^\circ$

2. The measure of $\angle GOE$ is 74° . What is the measure of $\angle GFE$?



$\angle GFE = \frac{1}{2} 74$
 $\angle GFE = 37^\circ$

3. The measure of $\angle WCY = 83^\circ$. What is $\angle X CZ$?

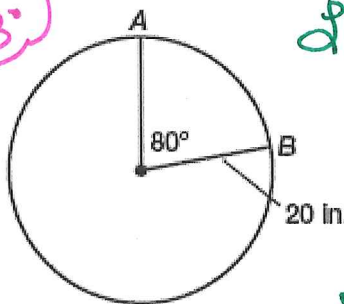


$\therefore \angle X CZ = 83^\circ$

A theorem we don't use but is true: If 2 // intersect the same circle, the arcs they create are \cong .

$\therefore \widehat{WY} \cong \widehat{XZ}$

4. Find the arc LENGTH of arc AB. $C = 40\pi$ in



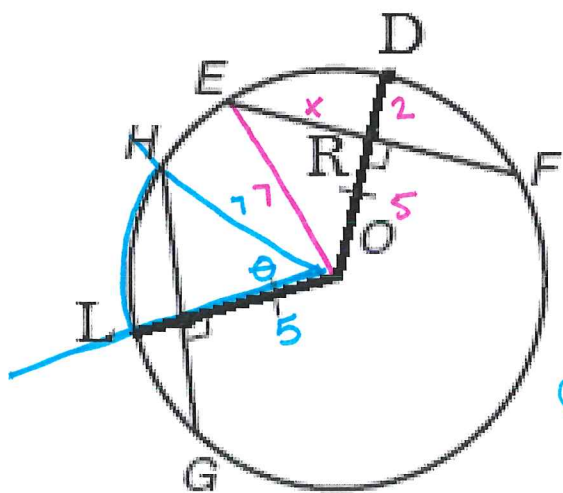
$d = \frac{a}{360} C = \frac{80 \cdot 40\pi}{360}$

$\frac{3200\pi}{360} = \frac{80\pi}{9}$

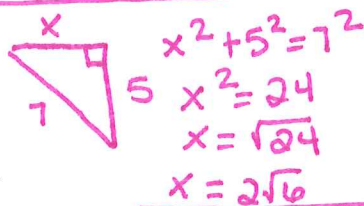
$8.8\pi \approx$

$d \approx 27.92$ in

5. The radius of circle O is 7ft and $OR = 5$ ft. (a) Find ER. (b) Find HG. (c) Find $m\widehat{HL}$.



a.) Find ER



$x^2 + 5^2 = 7^2$
 $x^2 = 24$
 $x = \sqrt{24}$
 $x = 2\sqrt{6}$
 $x = 4.899$ ft

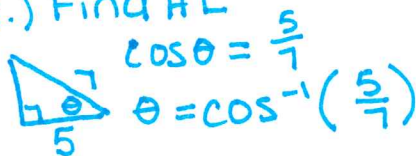
OR $ER = 4.90$ ft

b.) Find HG

$HG = 2ER$
 $HG = 2(4.899)$
 $HG = 9.798$ ft

OR $HG = 4\sqrt{6}$ ft

c.) Find $m\widehat{HL}$

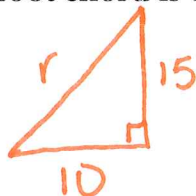
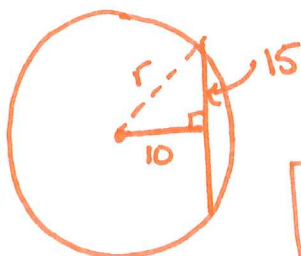


$\cos \theta = \frac{5}{7}$

$\theta = \cos^{-1}(\frac{5}{7})$

$\theta \approx 44.42^\circ$

6. 7. Find the radius of a circle if a 30 foot chord is 10 feet from the center of the circle. Round to the nearest hundredth.



$r \approx 18.03$ ft

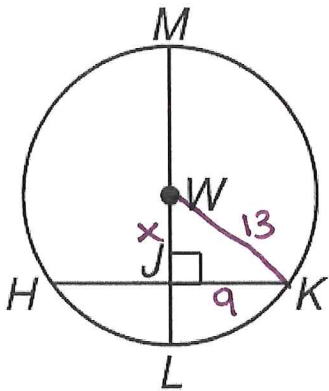
$10^2 + 15^2 = r^2$

$100 + 225 = r^2$

$325 = r^2$

$5\sqrt{13} = r$

7. Circle W has a radius of 13cm. Radius WL is perpendicular to chord HK. HK is 18cm. (a) Find WJ. (b) Find JL.



a.) Find WJ

$$x^2 + 9^2 = 13^2$$

$$x^2 + 81 = 169$$

$$x^2 = 88$$

$$x = 2\sqrt{22}$$

$$\boxed{WJ \approx 9.38 \text{ cm}}$$

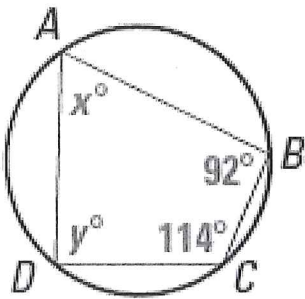
b.) Find JL.

$$\text{radius} - WJ = JL$$

$$13 - 9.38 = JL$$

$$\boxed{JL = 3.62 \text{ cm}}$$

8. Find x and find y.



Remember opposite \angle s in an inscribed quadrilateral are Suppl.

$$x + 114 = 180$$

$$\boxed{x = 66^\circ}$$

$$y + 92 = 180$$

$$\boxed{y = 88^\circ}$$