

Name: Key

Geometry Extra Review (10.3-10.4) Practice

1. Determine the measure of each minor arc. 2. Determine the measure of each central or inscribed angle.

a. \widehat{EF}

$m\widehat{EF} = 45^\circ$

b. \widehat{IJ}

$\widehat{IJ} = 120^\circ$

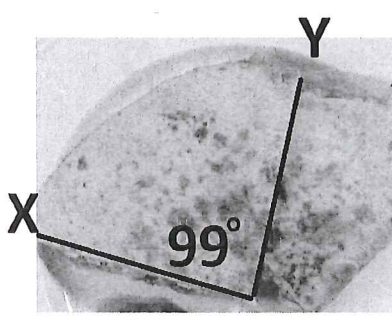
a. $m\angle LKJ$

$\angle LKJ = 98 + 30$
 $\angle LKJ = 128^\circ$

b. $m\angle QBR$

$\angle QBR = 77.5^\circ$

3. The figure represents a quesadilla with a diameter of 14 inches. Find the ~~exact~~ arc length of \widehat{XY} .



$d = 14$

$s = \frac{\theta}{360} \cdot c$

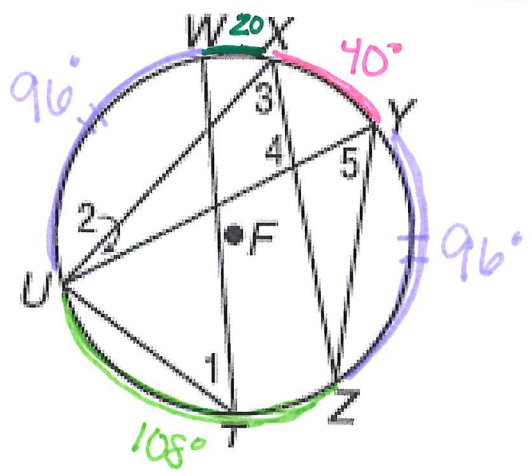
$s = \frac{99}{360} \cdot 14\pi = \frac{1386\pi}{360}$

$s = \frac{77\pi}{20}$ in

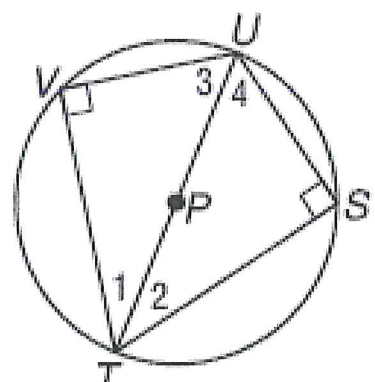
$s = 12.09$ in

4. In $\odot F$, $m\widehat{WX} = 20$, $m\widehat{XY} = 40$, $m\widehat{UZ} = 108$, and $m\widehat{UW} = m\widehat{YZ}$. Find the measures of the numbered angles.

$\angle 1 = 48^\circ$
 $\angle 2 = 20^\circ$
 $\angle 3 = 54^\circ$
 $\angle 4 = 106^\circ$
 $\angle 5 = 54^\circ$



5. ALGEBRA Triangles TVU and TSU are inscribed in $\odot P$ with $\widehat{VU} \cong \widehat{SU}$. Find the measure of each numbered angle if $m\angle 2 = x + 9$ and $m\angle 4 = 2x + 6$.



$\angle 2 + \angle 4 + 90 = 180$ Δ Sum

$x + 9 + 2x + 6 + 90 = 180$

$3x + 105 = 180$

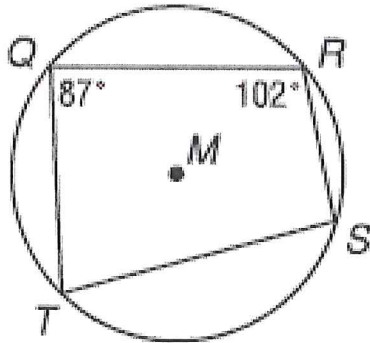
$3x = 75$

$x = 25$

$\angle 1 = 34^\circ$ $\angle 3 = 56^\circ$

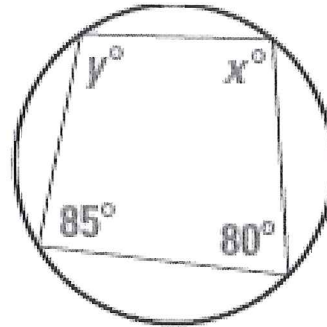
$\angle 2 = 34^\circ$ $\angle 4 = 56^\circ$

6. Quadrilateral QRST. Find $\angle S$ and $\angle T$.



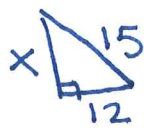
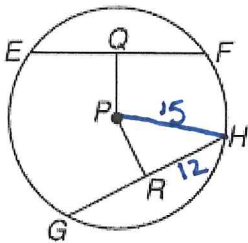
$\angle T = 78^\circ$ $\angle S = 93^\circ$

7. Find x and y .



$x = 95^\circ$
 $y = 100^\circ$

8. Chords \overline{EF} and \overline{GH} are equidistant from the center. If the radius of $\odot P$ is 15 and $EF = 24$, find PR and RH .

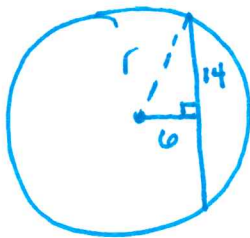


$x^2 + 12^2 = 15^2$
 $x^2 + 144 = 225$
 $x^2 = 81$
 $x = 9$

$PR = 9$

$RH = \frac{1}{2} 24$
 $RH = 12$

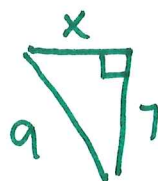
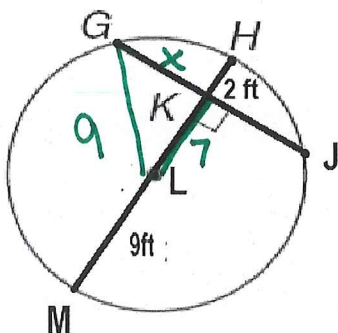
9. Find the radius of a circle if a 28 foot chord is 6 feet from the center of the circle. Find the exact value and then round to the nearest hundredth.



$6^2 + 14^2 = r^2$
 $232 = r^2$
 $\sqrt{232} = r$
 $r = 2\sqrt{58}$

$r \approx 15.23 \text{ ft}$

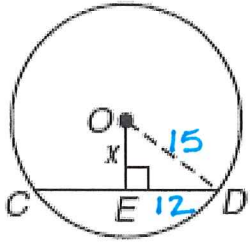
10. Find the value of \underline{JG} , if $KL = 9 \text{ ft}$.



$x^2 + 7^2 = 9^2$
 $x^2 + 49 = 81$
 $x^2 = 32$
 $x = \sqrt{32}$
 $x = 4\sqrt{2} \text{ ft}$

$x = 5.66 \text{ ft}$
 $JG = 11.32 \text{ ft}$

11. In $\odot O$, $\overline{CD} \perp \overline{OE}$, $OD = 15$, and $CD = 24$. Find x .

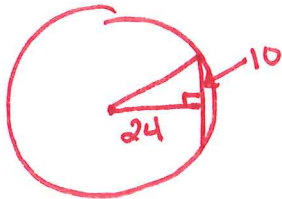


$$x^2 + 12^2 = 15^2$$

$$x^2 = 81$$

$$x = 9$$

12. A chord of a circle 20 inches long is 24 inches from the center of a circle. Find the length of the radius.



$$24^2 + 10^2 = r^2$$

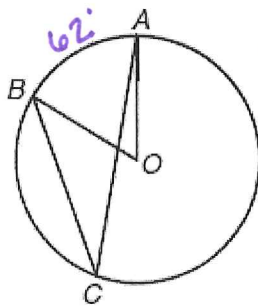
$$576 + 100 = r^2$$

$$r^2 = 676$$

$$r = \sqrt{676}$$

$$r = 26 \text{ inches}$$

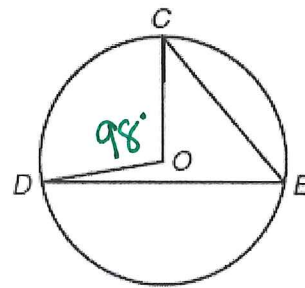
13. The measure of $\angle AOB = 62^\circ$.
What is the measure of $\angle ACB$?



$$\angle ACB = \frac{1}{2} 62$$

$$\angle ACB = 31^\circ$$

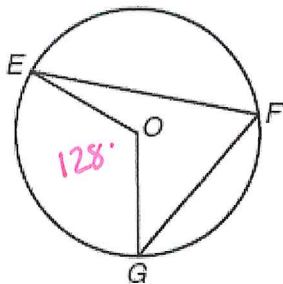
14. The measure of $\angle COD = 98^\circ$.
What is the measure of $\angle CED$?



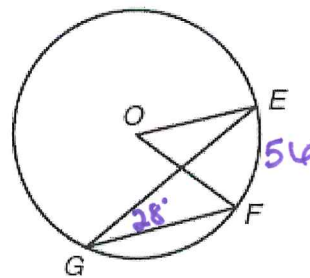
$$\angle CED = \frac{1}{2} 98$$

$$\angle CED = 49^\circ$$

15. The measure of $\angle EOG = 128^\circ$.
What is the measure of $\angle EFG$?

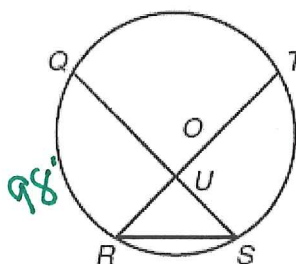


$$\angle EFG = \frac{1}{2} 128$$



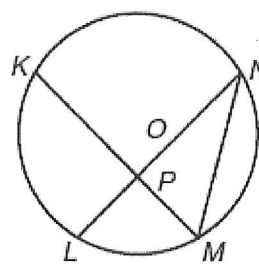
$$\angle EOF = 56^\circ$$

17. The measure of $\widehat{TS} = 94^\circ$ and $\widehat{QR} = 98^\circ$.
What is the measure of $\angle TUS$?



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94. These are
from
10.5-10.7

18. The measure of $\widehat{LM} = 50^\circ$ and $\widehat{KN} = 120^\circ$.
What is the measure of $\angle LPM$?



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10.5-10.7