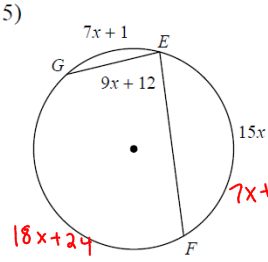
5)

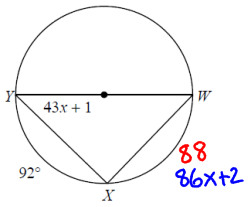


$7x+1+15x+15+18x+24 = 360$

$360-(7x+1+15x+15) = 18x+24$

$\frac{1}{2}(344-22x) = 9x+12$

6)



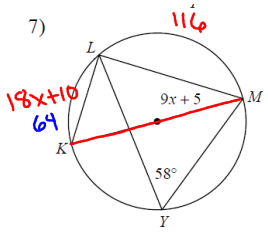
88

$86x+2$

$43x+1 = \frac{1}{2}(88)$

$92+86x+2 = 180$

7)

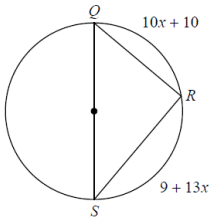


$18x+10+116=180°$

$18x+10=64$

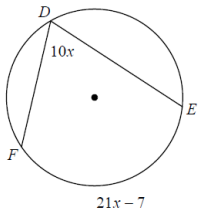
$9x+5=\frac{1}{2}(64)$

11)



$10x+10+9+13x=180$

8)



$10x=\frac{1}{2}(21x-7)$

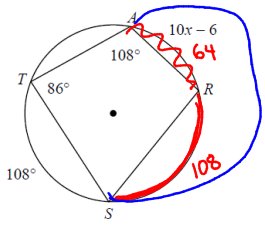
$10x=10.5x-3.5$

$-10.5x \quad -10.5x$

$\frac{-.5x}{-.5} = \frac{-3.5}{-.5}$

$x=7$

12)

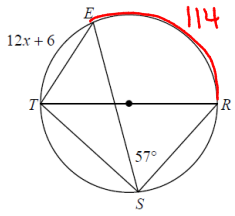


172

$172 = 108+10x-6$

$10x-6=64$

15)

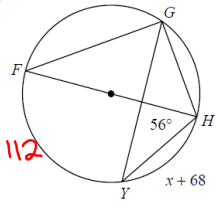


114

$180 = 12x+6+114$

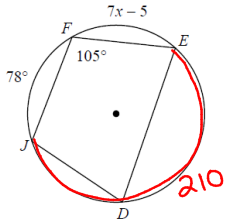
$66 = 12x+6$

16)



$180 = 112+x+68$

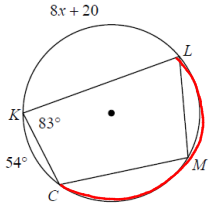
18)



210

$360 = 210+78+7x-5$

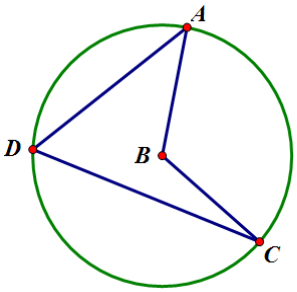
20)



166

$360 = 166+54+8x+20$

Measure of Arcs, Inscribed Angles, and Central Angles



$m\angle ABC = 120°$ central

$m\angle ADC = 60°$ inscribed

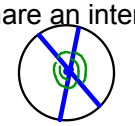
$m\overset{\frown}{AC} = 120°$

central = arc

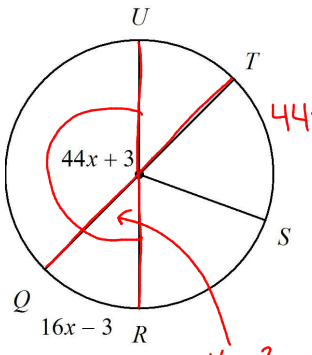
inscribed = (1/2)arc

Questions to Consider:

Do I have a central angle or an inscribed angle?
Do I have a semi-circle or am I working with the entire 360 degrees?
Do I have two angles that share an intercepted arc?
Do I have a vertical pair?

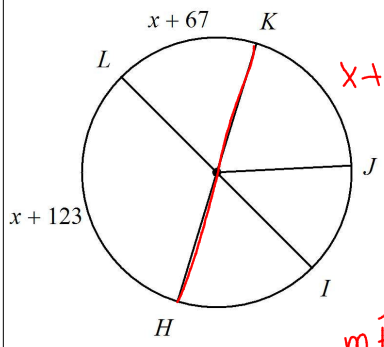


$m\widehat{RQ}$



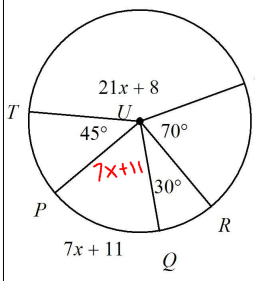
$44x+3+16x-3=180$
$\frac{60x}{60} = \frac{180}{60}$
$x=3$
$m\widehat{RQ} = 16x-3$
$= 16(3)-3$
$m\widehat{RQ} = 45$

$m\widehat{HL}$



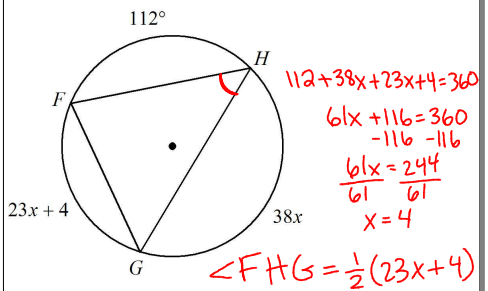
$x+123+x+67=180$
$2x+190=180$
$-190 \quad -190$
$\frac{2x}{2} = \frac{-10}{2}$
$x=-5$
$m\widehat{HL} = -5+123$
$=118$

$m\angle QUP$



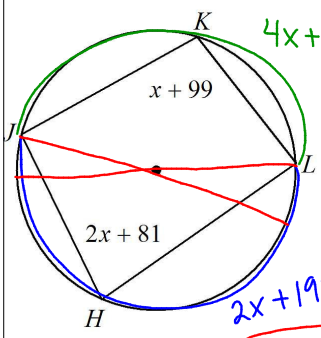
$21x+8+70+30+45+7x+11 = 360$
$28x+164=360$
$-164 \quad -164$
$\frac{28x}{28} = \frac{196}{28}$
$x=7$
$\angle QUP = 7(7)+11$
$=60$

Find $m\angle FHG$



$112+38x+23x+4=360$
$61x+116=360$
$-116 \quad -116$
$\frac{61x}{61} = \frac{244}{61}$
$x=4$
$\angle FHG = \frac{1}{2}(23x+4)$
$= \frac{1}{2}(23(4)+4)$
$= \frac{1}{2}(96)$
$=48$

Find $m\widehat{JL}$



$4x+162+2x+198 = 360$
$6x+360=360$
$-360 \quad -360$
$6x=0$
$x=0$
$m\widehat{JL} = 162$