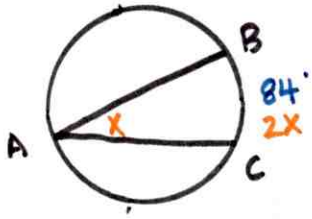
10.4

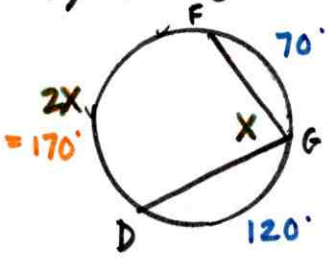
3) $m\angle A$



$m\angle A = 84/2$

$\boxed{m\angle A = 42°}$

4) $m\angle G$



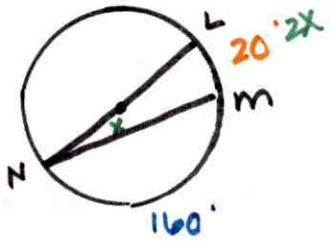
$m\overset{\frown}{FD} = 360 - (120+70)$

$= 170°$

$m\angle G = 170/2$

$\boxed{m\angle G = 85°}$

5) $m\angle N$



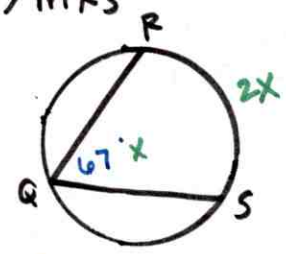
$m\overset{\frown}{Lm} = 180 - 160$

$= 20°$

$m\angle N = 20/2$

$\boxed{m\angle N = 10°}$

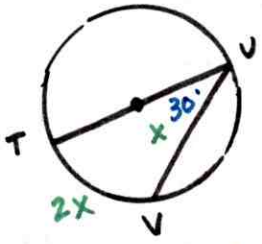
6) $m\overset{\frown}{RS}$



$m\overset{\frown}{RS} = 2(67)$

$\boxed{m\overset{\frown}{RS} = 134°}$

7) $m\overset{\frown}{VU}$

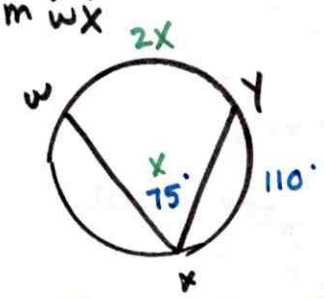


$m\overset{\frown}{TV} = 2(30) = 60°$

$m\overset{\frown}{VU} = 180 - 60$

$\boxed{m\overset{\frown}{VU} = 120°}$

8) $m\overset{\frown}{WX}$

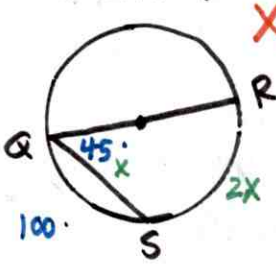


$m\overset{\frown}{WY} = 2(75) = 150°$

$m\overset{\frown}{WX} = 360 - (110+150)$

$\boxed{m\overset{\frown}{WX} = 100°}$

9) Find 2 ways to correct the error.



X

$m\overset{\frown}{SR} = 80°$

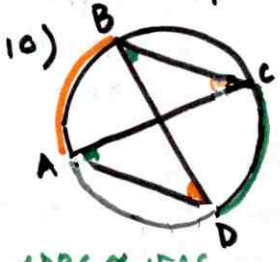
$m\angle RQS = 40°$

$m\overset{\frown}{SR} = 90°$

$m\overset{\frown}{QS} = 90°$

Name 2 pairs of $\cong$ angles.

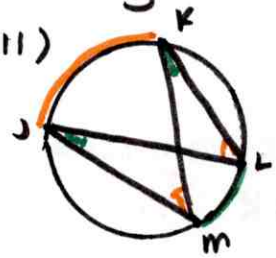
10)



$\angle DBC \cong \angle DAC$

$\angle ACB \cong \angle ADB$

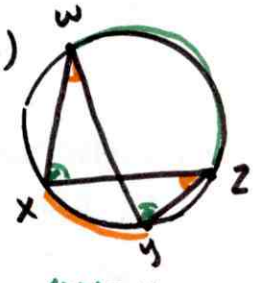
11)



$\angle mJL \cong \angle mKL$

$\angle JmK \cong \angle JLK$

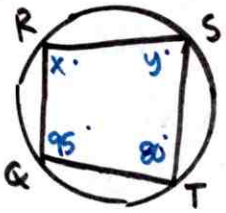
12)



$\angle WXZ \cong \angle WyZ$

$\angle XWy \cong \angle XZy$

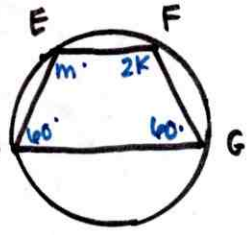
13)



$x + 80 = 180$ $\quad$ $y + 95 = 180$

$\boxed{x = 100°}$ $\quad$ $\boxed{y = 85}$

14)

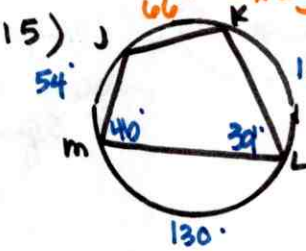


$2K + 60 = 180$ $\quad$ $m + 60 = 180$

$2K = 120$ $\quad$ $\boxed{m = 120}$

$\boxed{K = 60}$

15)



$m\overset{\frown}{JK} = 360 - (54+110+130)$

$3a = \frac{54+66}{2}$ $\quad$ $4b = \frac{66+110}{2}$

$3a = 60$ $\quad$ $4b = 88$

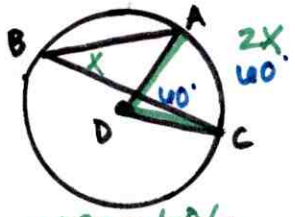
$\boxed{a = 20}$ $\quad$ $\boxed{b = 22}$

DEFG

16) $\angle ADC$ is a central angle and the $m\angle ADC = 60°$
what is the $m\angle ABC$?

A 15° B 30° ✓

C 60° D 120°



$m\angle ABC = 60/2$

17) Find the measure of each inscribed angle and their sum. All $\cong$.

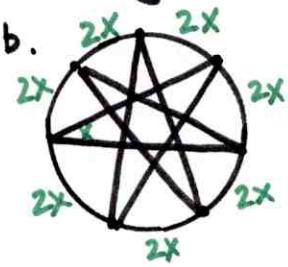
a.

$x = 36$

sum $= 5(36) = 180°$

$5(2x) = 360$
$10x = 360$
$x = 36$

b.

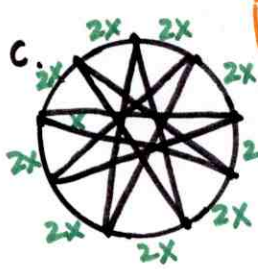


$x = 25.7$

sum $= 7(25.7) = 180°$ ~179.9

$7(2x) = 360$
$14x = 360$
$x = 25.7$

c.



$x = 20°$

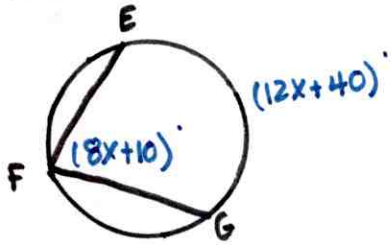
sum $= 9(20) = 180°$

$9(2x) = 360$
$18x = 360$
$x = 20$

18) what is the value of x?

A 5 B 10

C 13 D 15



$8x + 10 = \frac{12x + 40}{2}$

$8x + 10 = 6x + 20$

$2x = 10$

$x = 5$

Determine whether the quadrilateral can always be inscribed in a circle. Explain.

20) Square — yes — opp. $\angle$s supp.

21) Rectangle — yes — opp. $\angle$s supp.

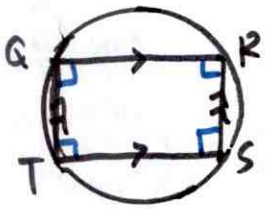
22) ||-gram — NO — opp $\angle$s are not always supp.

23) kite — NO — opp. $\angle$s are not always supp.

24) Rhombus — NO — opp. $\angle$s not always supp.

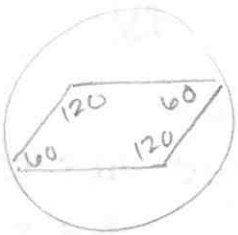
25) Isosceles Trapezoid — yes — opp. $\angle$s supp.

19) Parallelogram QRST is inscribed in $\odot C$. Find $m\angle R$. 90°

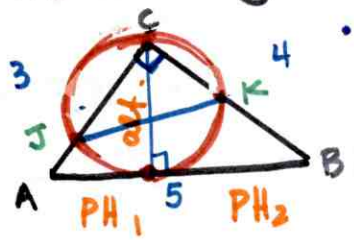


$Q + S = 180$
$R + T = 180$

||-grams must be a rectangle or square



26) $\angle C$ is a $\angle$. If you draw the smallest possible circle through C and tangent to $\overline{AB}$, the circle will intersect $\overline{AC}$ at J and $\overline{BC}$ at K. Find the exact length of $\overline{JK}$.



- $\overline{JK}$ is a diameter b/c $\angle C = 90°$ (Rt. Δ inscribed
- The altitude from C to $\overline{AB}$ is a diamet

$3^2 = PH_1(5)$
$9 = PH_1(5)$
$PH_1 = 9/5$
1.8

$PH_2 = 5 - 9/5$
$PH_2 = 16/5$
3.2

$\sqrt{alt^2} = \sqrt{(\frac{9}{5})(\frac{16}{5})}$
$alt = \sqrt{\frac{144}{25}}$
$alt = 12/5 \rightarrow JK = 12/5$