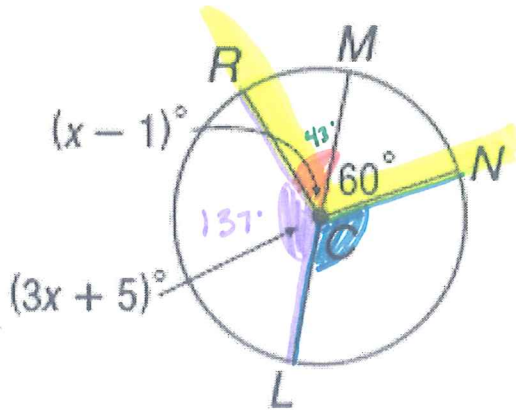


Name: Key

Angles and Arcs HW

For 1 - 4, find the measure of the indicated angles. Find x linear pairs are Suppl.



$$\begin{aligned} \angle RCL + \angle RCM &= 180 \\ 3x + 5 + x - 1 &= 180 \\ x &= 44 \end{aligned}$$

1. $m\angle NCL$

$$\begin{aligned} 60 + \angle NCL &= 180 \\ \angle NCL &= 120 \end{aligned}$$

2. $m\angle RCL$

$$\begin{aligned} \angle RCL &= 3(44) + 5 \\ m\angle RCL &= 137 \end{aligned}$$

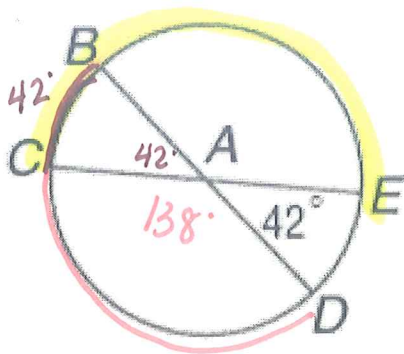
3. $m\angle RCM$

$$\begin{aligned} x &= 44 \\ m\angle RCM &= 44 - 1 \\ m\angle RCM &= 43 \end{aligned}$$

4. $m\angle RCN$

$$\begin{aligned} \angle RCN &= 43 + 60 \\ m\angle RCN &= 103 \end{aligned}$$

For 5 - 8, find the measure of the indicated arc or arc length if $r = 7$ in.



5. $m\widehat{BC}$ Arc Measure!

$$m\widehat{BC} = 42^\circ$$

6. $m\widehat{CBE}$ ignore this.

$$m\widehat{CBE} = 180^\circ$$

Semi Circle!

$$d = \frac{a}{360} C$$

7. Arc length of \widehat{ED} with $d = 13$ cm

$$\begin{aligned} a &= 42^\circ \\ C &= 13\pi \end{aligned}$$

$$\begin{aligned} d &= \frac{42}{360} \cdot 13\pi \\ d &= \frac{546\pi}{360} \\ d &= \frac{91\pi}{60} \text{ cm} \end{aligned}$$

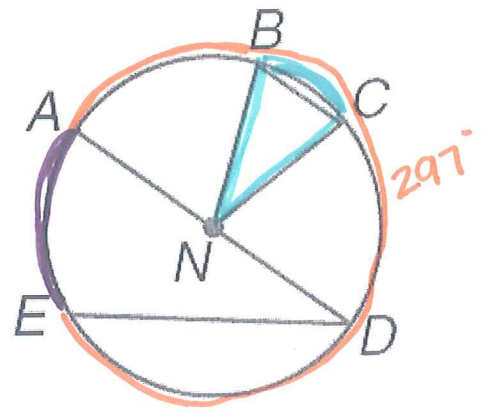
8. Arc length of \widehat{CD} with $d = 13$ cm

$$\begin{aligned} a &= 138^\circ \\ C &= 13\pi \\ d &= \frac{138}{360} \cdot 13\pi \end{aligned}$$

$$\begin{aligned} d &= \frac{1794\pi}{360} \\ d &= \frac{299\pi}{60} \text{ cm} \end{aligned}$$

Name: _____

9. Name the radii of $\odot N$.
 $\overline{NC}, \overline{NB}, \overline{NA}, \overline{ND}$



10. If $m\widehat{AE} = 68^\circ$ find $m\angle ADE$.

$$\angle ADE = \frac{1}{2} 68$$

$$m\angle ADE = 34^\circ$$

11. Find $m\widehat{BC}$ if $m\angle BNC = 23^\circ$

$$m\widehat{BC} = m\angle BNC$$

$$m\widehat{BC} = 23^\circ$$

12. Find $m\widehat{AE}$ if $m\widehat{EBA} = 297^\circ$

$$m\widehat{AE} + m\widehat{EBA} = 360^\circ$$

$$m\widehat{AE} = 63^\circ$$

Directions: For 13, use Circle P and $m\widehat{EN} = 80^\circ$ and $m\angle GPM = 105^\circ$ to find each measure.

13. $m\angle EGN = 40^\circ$

14. $m\widehat{GE} = 100^\circ$

15. $m\widehat{MN} = 75^\circ$

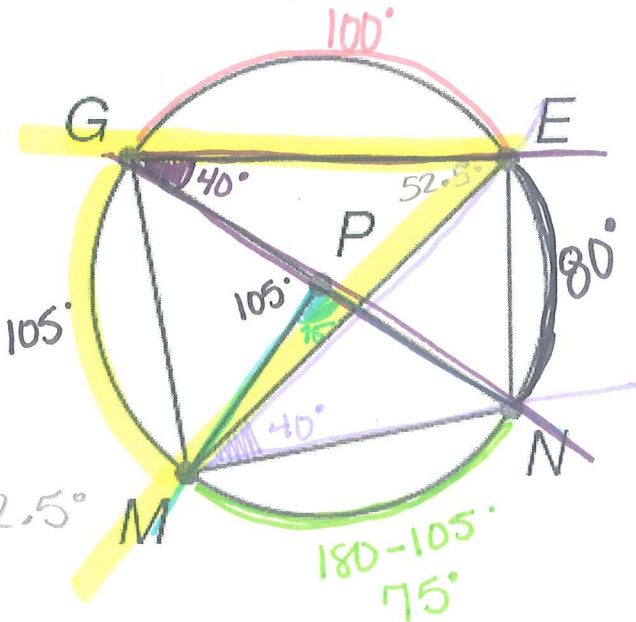
16. $m\angle EMN = 40^\circ$

17. $m\angle MPN = 75^\circ$

18. $m\widehat{NEG} = 180^\circ$

19. $m\widehat{MGN} = 285^\circ$

20. $m\angle GEM = 52.5^\circ$

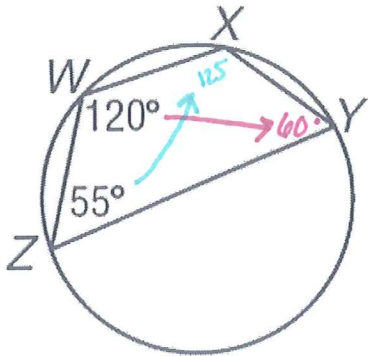


Name: _____

Remember Quad.
inscribed in a circle:

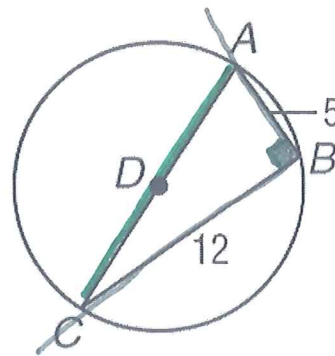
Directions: For 21-24, find the measure of each angle or segment in the figure. *Opp \angle are suppl.*

21. $m\angle X$, $m\angle Y$



$m\angle X = 125^\circ$
 $m\angle Y = 60^\circ$

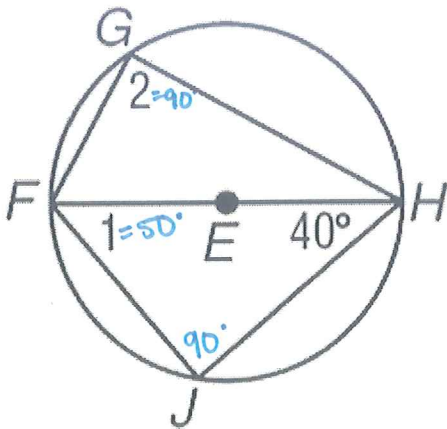
22. $m\angle ABC$, and AD.



$5^2 + 12^2 = d^2$
 $169 = d^2$
 $d = 13$
 $r = 6.5$
 $AD = 6.5$

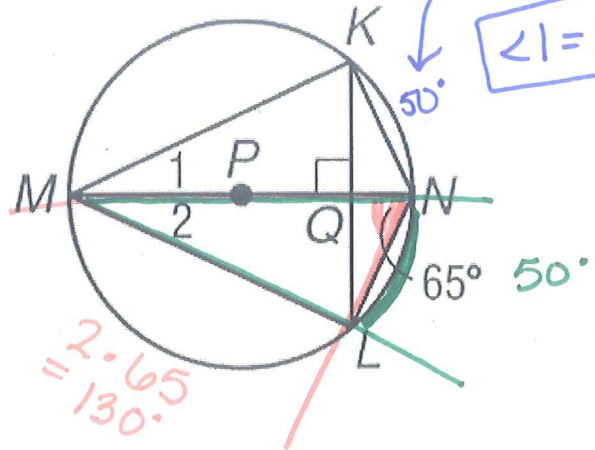
$m\angle ABC = \frac{1}{2} 180$
 $m\angle ABC = 90^\circ$

23. $m\angle 1$, $m\angle 2$



$m\angle 1 = 50^\circ$
 $m\angle 2 = 90^\circ$

24. $m\angle 1$, $m\angle 2$



give students
 $\angle 1 = 25^\circ$

$m\angle 2 = \frac{1}{2} 50$
 $m\angle 2 = 25^\circ$