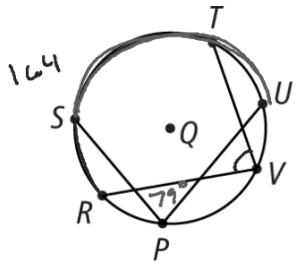
2. a. If $m\overset{\frown}{RST} = 164$, what is $m\angle RVT$?

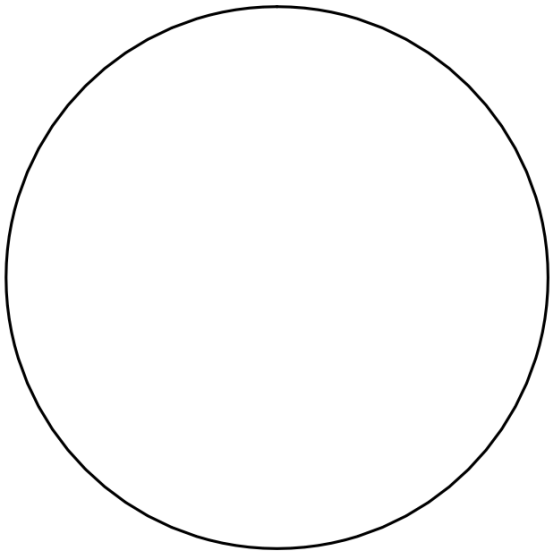
82°

Enter your answer.



b. If $m\angle SPU = 79$, what is $m\overset{\frown}{STU}$? = 158

Two inscribed angles that intercept the same arc are congruent.



For questions 11-15, use the figure below. Find each measure.

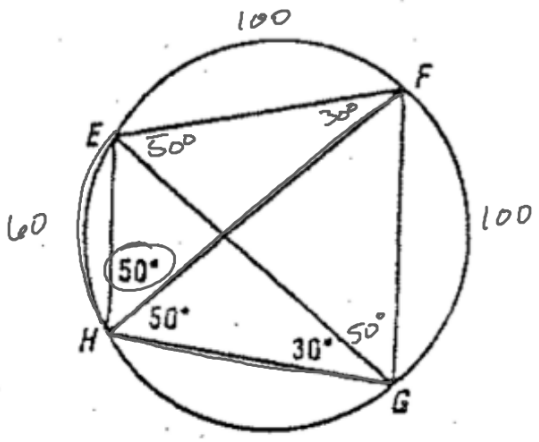
11. $m\widehat{FG}$

12. $m\angle FEG$

13. $m\widehat{EH}$

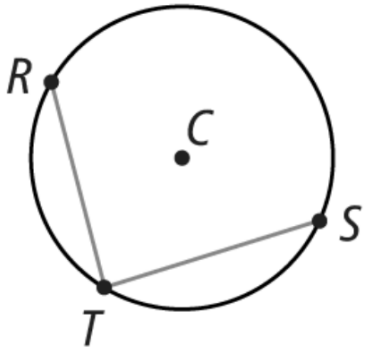
14. $m\angle EFH$

15. $m\angle FGE$



An angle inscribed in a semicircle is a right angle.

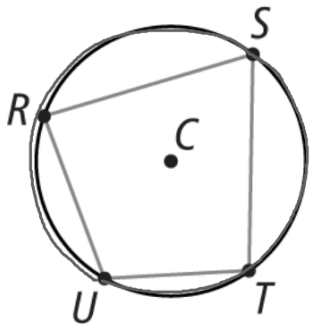
If... $m\overset{\frown}{RS} = 180$



Then... $m\angle T = 90$

The opposite angles of an inscribed quadrilateral are supplementary.

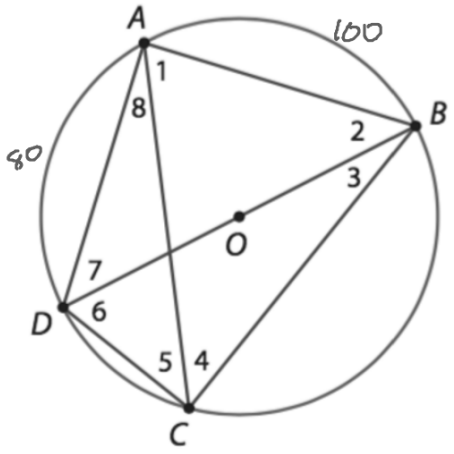
If...



Then... $m\angle R + m\angle T = 180$

$m\angle S + m\angle U = 180$

In the diagram below, $\overline{BD}$ is a diameter of the circle with center O. Points A, B, C, and D are on the circle.



$m\angle 1$

$m\angle 2 = 40^\circ$

$m\angle 3$

$m\angle 4 = 50^\circ$

$m\angle 5 = 40^\circ$

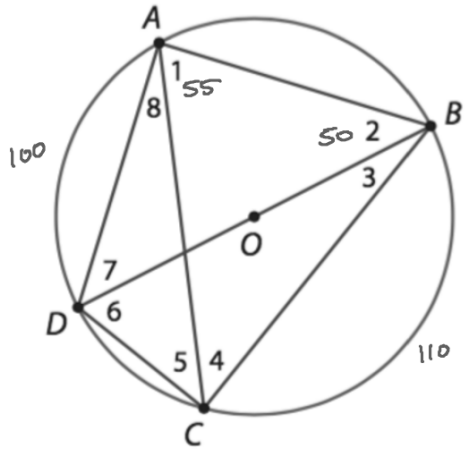
$m\angle 6$

$m\angle 7 = 50^\circ$

$m\angle 8$

If measure of arc AB = 100°, find the measure of as many possible numbered angles as possible.

In the diagram below, $\overline{BD}$ is a diameter of the circle with center O. Points A, B, C, and D are on the circle.



$\overset{\frown}{mAB} = 80$

$\overset{\frown}{mBC} = 100$

$\overset{\frown}{mCD} = 110$

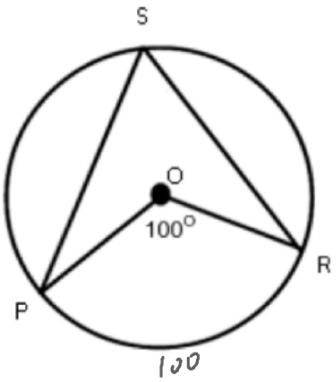
$\overset{\frown}{mAD} = 70$

Given the two measures $m\angle 1 = 55°$ *and* $m\angle 2 = 50°$, find the measures of the four minor arcs AB, BC, CD, and DA.

4) $m\angle POR = 100°$

$m\widehat{PR} =$ 100

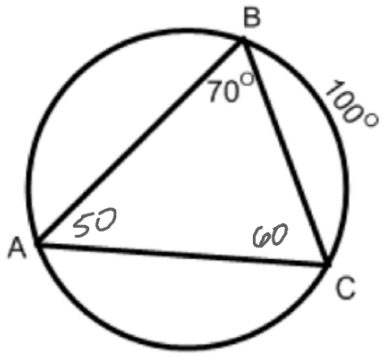
$m\angle PSR =$ 50



5) $m\angle ABC = 70°$, $mBC = 100°$

$m\widehat{AC} =$ 140 $m\angle C =$ 60

$m\angle A =$ 50 $m\widehat{AB} =$ 120

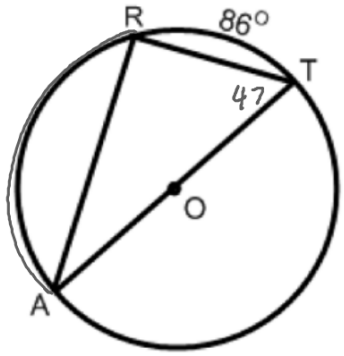


6) $\overline{AT}$ is a diameter,

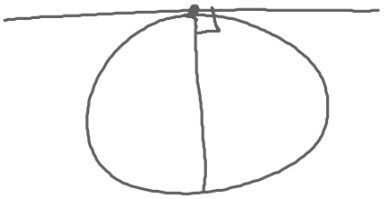
$m\widehat{RT} = 86°$

$m\angle A =$ 43° $m\angle R =$ 90°

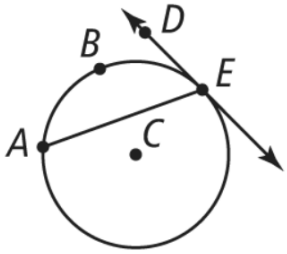
$m\angle T =$ 47 $m\widehat{AR} =$ 94



The measure of an angle formed by a tangent and a chord is half the measure of its intercepted arc.



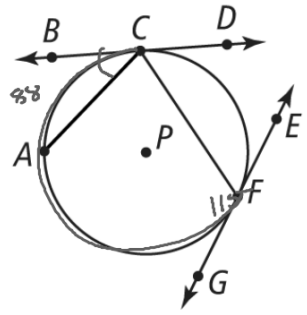
If…



Then… $m\angle AED = \frac{1}{2} m\overset{\frown}{ABE}$

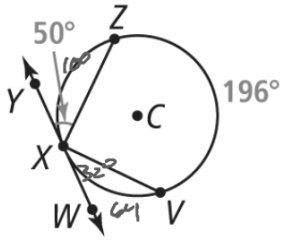
3. a. Given $\overleftrightarrow{BD}$ tangent to $\odot P$ at point C, if $m\overset{\frown}{AC} = 88$, what is $m\angle ACB$? = 44

Enter your answer.



b. Given $\overleftrightarrow{EG}$ tangent to $\odot P$ at point F, if $m\angle GFC = 115$, what is $m\overset{\frown}{FAC}$? 230°

4. a. Given $\overleftrightarrow{WY}$ tangent to $\odot C$ at point X, what is $m\overset{\frown}{XZ}$?

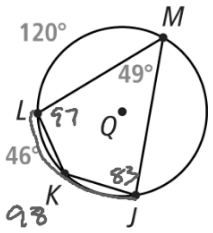


Enter your answer.

b. What is $m\angle VXW$?

5. In $\odot Q$, find $m\overset{\frown}{JL}$. = 98°

Enter your answer.



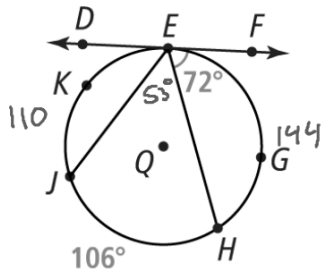
In $\odot Q$, find $m\overset{\frown}{MJ}$. = 142

In $\odot Q$, find $m\angle KJM$. = 83

In $\odot Q$, find $m\angle KLM$.

9. Line DF is tangent to $\odot Q$ at point E. Find $m\overset{\frown}{EH}$.

Enter your answer.



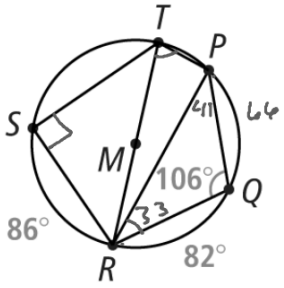
10. Line DF is tangent to $\odot Q$ at point E. Find $m\overset{\frown}{EJ}$.

11. Line DF is tangent to $\odot Q$ at point E. Find $m\angle HEJ$.

12. Line DF is tangent to $\odot Q$ at point E. Find $m\angle DEJ$.

13. In $\odot M$, find $m\angle PRQ$.

Enter your answer.



14. In $\odot M$, find $m\angle PTR$. = 74

15. In $\odot M$, find $m\angle RST$. = 90°

16. In $\odot M$, find $m\angle SRT$.