

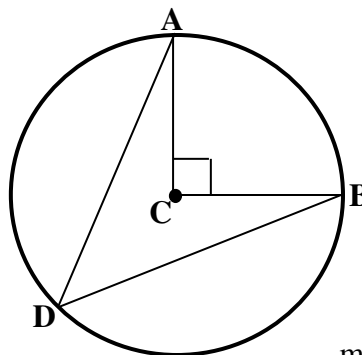
**Section 9.1 – Central and Inscribed Angles**

**Note:** Chapter structured differently from book.

A \_\_\_\_\_ angle is an angle whose vertex lies on the \_\_\_\_\_ of a circle.  
The measure of the central angle  $\angle ACB$  and its \_\_\_\_\_ arc  $\widehat{AB}$  are \_\_\_\_\_.

An \_\_\_\_\_ angle is an angle whose vertex lies on the \_\_\_\_\_ of a circle.

The measure of the inscribed angle  $\angle ADB$  is \_\_\_\_\_  
the measure of its intercepted arc  $\widehat{AB}$ .



$m\angle ACB =$  \_\_\_\_\_

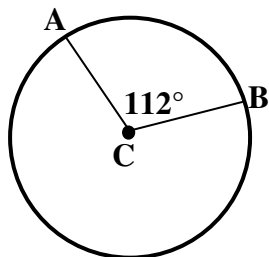
$m\widehat{AB} =$  \_\_\_\_\_

$m\angle ADB =$  \_\_\_\_\_

**Ex 1:**

Find the indicated measure and state if it is an arc, central angle, or inscribed angle.

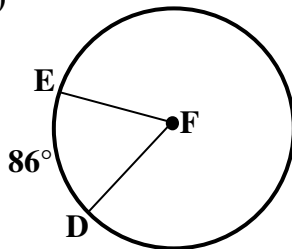
a)



$m\widehat{AB} =$  \_\_\_\_\_,

\_\_\_\_\_

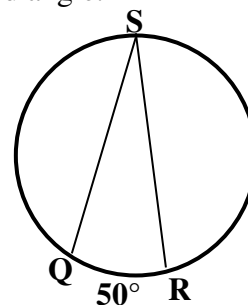
b)



$m\angle DFE =$  \_\_\_\_\_,

\_\_\_\_\_

c)

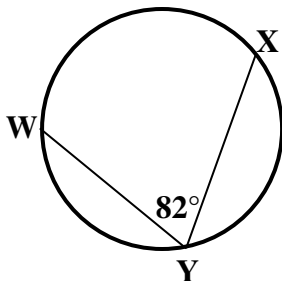


$m\angle QSR =$  \_\_\_\_\_,

\_\_\_\_\_

**Important:** When an arc is described using two points, always refer to the shorter arc.

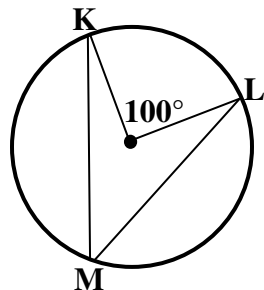
d)



$m\widehat{WX} =$  \_\_\_\_\_,

\_\_\_\_\_

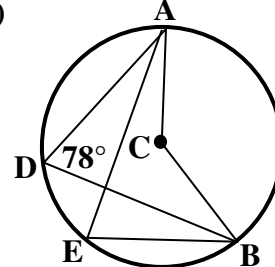
e)



$m\angle KML =$  \_\_\_\_\_,

\_\_\_\_\_

f)



$m\angle ACB =$  \_\_\_\_\_,

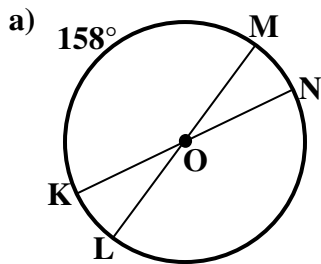
\_\_\_\_\_

$m\angle AEB =$  \_\_\_\_\_,

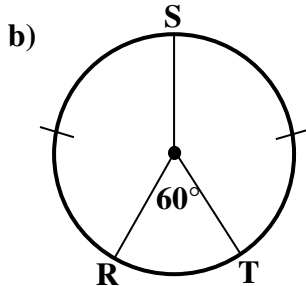
\_\_\_\_\_

**Ex 2:**

Find the indicated measure(s).



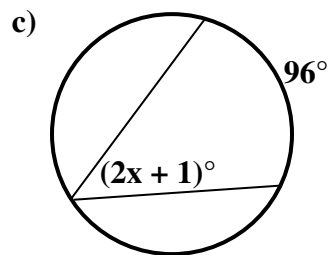
$$m\angle KOL = \underline{\hspace{2cm}}$$



$$m\widehat{RST} = \underline{\hspace{2cm}}$$

$$m\widehat{RS} = \underline{\hspace{2cm}}$$

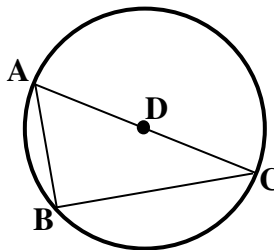
Solve for x.



$$x = \underline{\hspace{2cm}}$$

**Inscribed Right Triangle Theorem**

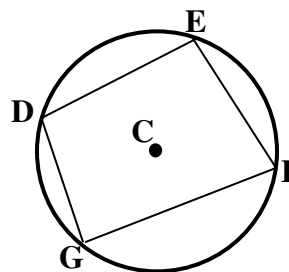
If a triangle is inscribed in a circle such that one of the sides of the triangle is the diameter of the circle, then the triangle is a right triangle.



If  $\overline{AC}$  is a diameter of the circle, then  $m\angle ABC = 90^\circ$ .

**Inscribed Quadrilateral Theorem**

If a quadrilateral is inscribed in a circle, then its opposite angles are supplementary.



$$m\angle D + m\angle F = 180^\circ$$

$$m\angle E + m\angle G = 180^\circ$$

**Ex 3:**

Find the value of the variable(s).

