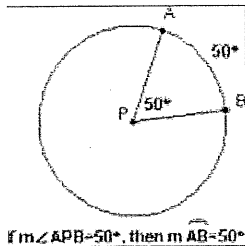


Mon. (11/3)

Section 6.4 Inscribed Angles and Polygons

1

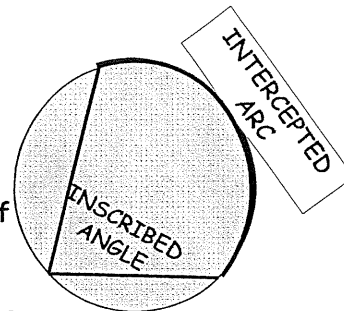
Central Angles are congruent to Arc Measures



2

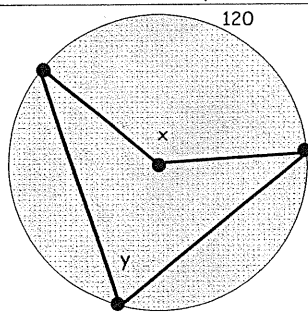
Inscribed Angle:

An angle whose **vertex** is on the circle and whose **sides** are **chords** of the circle



3

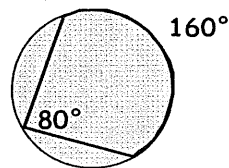
The measure of the inscribed angle is HALF the measure of the intercepted arc!



4

To find the measure of an inscribed angle...

$$\text{Inscribed Angle} = \frac{\text{Intercepted Arc}}{2}$$

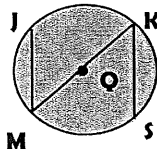


5

Examples

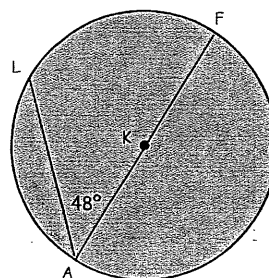
3. If $m\widehat{JK} = 80^\circ$, find $m\angle JMK$.

4. If $m\angle MKS = 56^\circ$, find $m\widehat{MS}$.



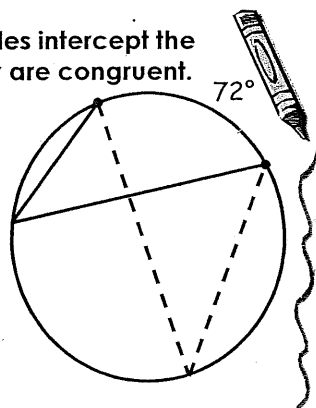
6

Find the measure of arc AL. (think about it!)



7

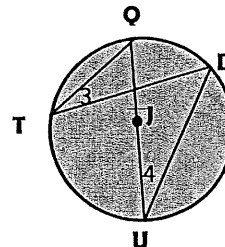
If two inscribed angles intercept the same arc, then they are congruent.



8

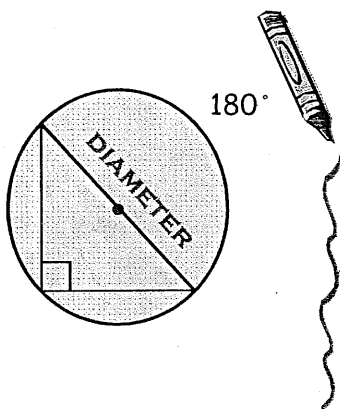
Example 5

In $\odot J$, $m\angle 3 = 5x$ and $m\angle 4 = 2x + 9$. Find the value of x .



9

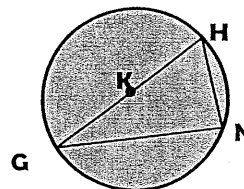
If a right triangle is inscribed in a circle then the hypotenuse is the diameter of the circle.



10

Example 6

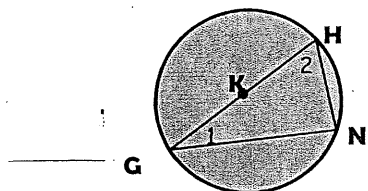
In $\odot K$, \overline{GH} is a diameter and $m\angle GNH = 4x - 14$. Find the value of x .



11

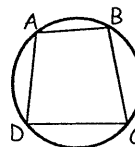
Example 7

In $\odot K$, $m\angle 1 = 6x - 5$ and $m\angle 2 = 3x - 4$. Find the value of x .



12

A circle can be circumscribed around a quadrilateral if and only if its opposite angles are supplementary.



$$m\angle A + m\angle C = 180$$

$$m\angle B + m\angle D = 180$$



13

Example 8 Find y and z .

