

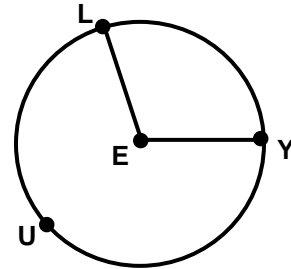
TOPIC 16-2: ARCS, SEMICIRCLES, & CENTRAL ANGLES

Name the following:

The central angle: _____

The minor arc: _____

The major arc: _____

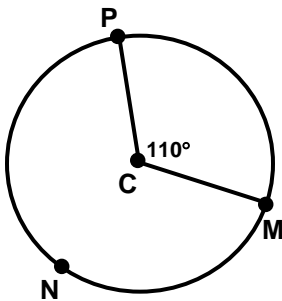


THEOREM: SUM OF CENTRAL ANGLES

The sum of the measures of the central angles of a circle with no interior points in common is _____.

Arcs are measured by their corresponding central angles.

Central Angle = Arc

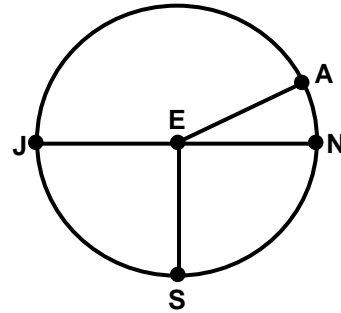


- $m\angle PCM =$ _____
- $m\widehat{PM} =$ _____
- $m\widehat{PNM} =$ _____
- What kind of arc is \widehat{PM} ? How do you know? _____

A **SEMICIRCLE** is an arc with a measure of _____. It is named by its endpoints and another point on the arc.

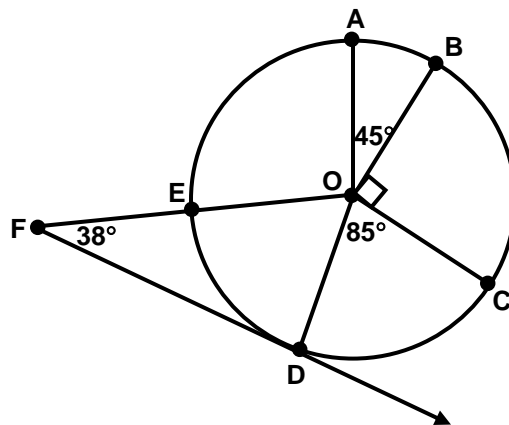
In circle E, $m\angle AEN = 18^\circ$, \overline{JN} is a diameter, and $m\angle JES = 90^\circ$. Find each measure.

- a) $m \widehat{AN} =$ _____
- b) $m \widehat{JA} =$ _____
- c) $m \widehat{JAS} =$ _____



Knowing: \overrightarrow{FD} is a tangent to circle O. Based on the angle measures given, find the measure of each of the following:

- a) $\widehat{AB} =$ _____
- b) $\widehat{AD} =$ _____
- c) $\widehat{AC} =$ _____
- d) $\widehat{BC} =$ _____
- e) $\widehat{ADC} =$ _____
- f) $\widehat{ACD} =$ _____
- g) $\widehat{ED} =$ _____
- h) $\widehat{AE} =$ _____
- i) $m\angle DOF =$ _____
- j) $m\angle EOA =$ _____



Find the indicated measures.

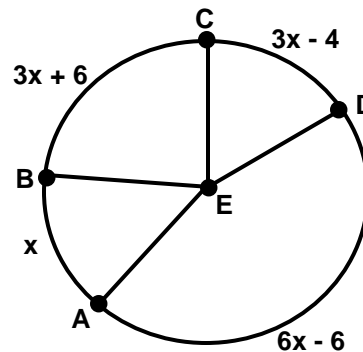
$x =$ _____

$m\angle AEB =$ _____

$m\angle BEC =$ _____

$m\angle CED =$ _____

$m\angle DEA =$ _____



Now You Try the Next Two:

#1: Find the measure of each arc in circle C and classify it. In the figure PZ is a diameter.

a) $\widehat{PN} =$ _____ ; _____

b) $\widehat{ZQP} =$ _____ ; _____

c) $\widehat{RZ} =$ _____ ; _____

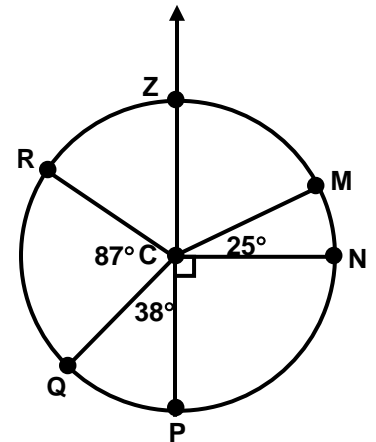
d) $\widehat{ZMP} =$ _____ ; _____

e) $\widehat{RM} =$ _____ ; _____

f) $\widehat{NQP} =$ _____ ; _____

g) $\widehat{QN} =$ _____ ; _____

h) $\widehat{RP} =$ _____ ; _____



#2: Find the indicated measures in circle P, \vec{ZX} is a tangent.

- a) $\widehat{FY} =$ _____
- b) $\widehat{YX} =$ _____
- c) $\widehat{FD} =$ _____
- d) $\widehat{DX} =$ _____
- e) $m\angle DPX =$ _____
- f) $m\angle XPY =$ _____
- g) $m\angle PXZ =$ _____

