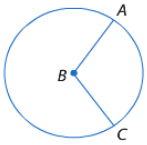
10-2

Measuring Angles and Arcs

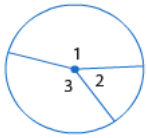
Central Angles

An angle whose vertex is also the center of the circle.



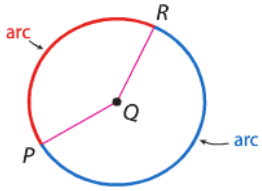
Sum of Central Angles

Always equal to 180 degrees



ARC

A portion of a circle that has two end points

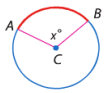


The degree measure of an arc is equal to the degree measure of it's central angle.

Types of Arcs

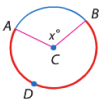
Minor Arcs (two capital letters)

Arcs that have a degree measure of less than 180 degrees.



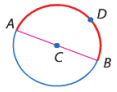
Major Arc (three capital letters)

Arcs that have a degree measure greater than 180 degrees.



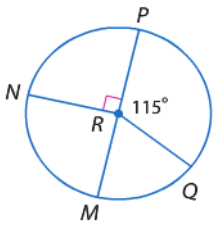
Semi Circle (three capital letters)

Arcs that have a degree measure equal to 180 degrees.



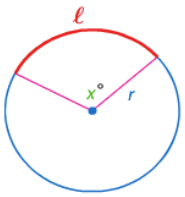
$\overline{PM}$ is a diameter of $\odot R$. Identify each arc as a *major arc*, *minor arc*, or *semicircle*. Then find its measure.

1) $\overset{\frown}{MQ}$
2) $\overset{\frown}{MNQ}$
3) $\overset{\frown}{MNP}$



ARC LENGTH

The length of an arc is a portion/part of the total circumference.



$$\ell = \frac{x}{360} \cdot 2\pi r$$

Find the length of $\overset{\frown}{ZY}$. Round to the nearest hundredth.