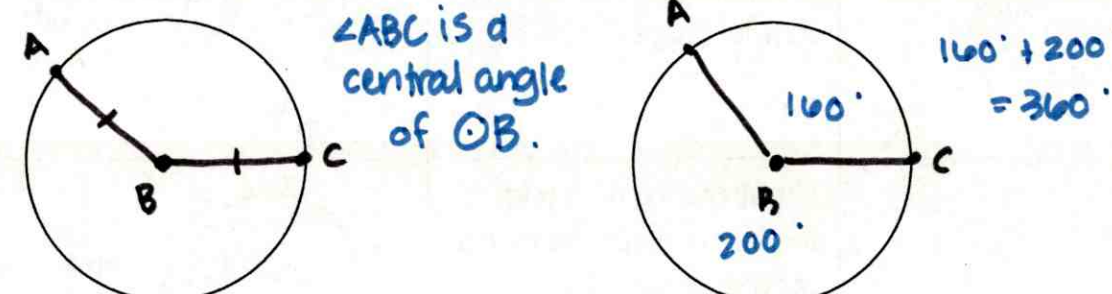
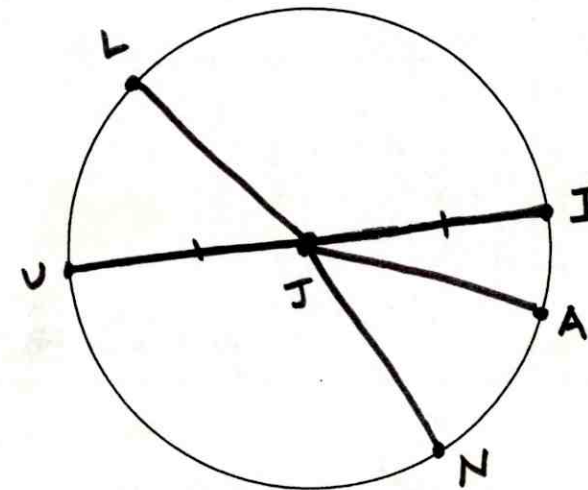
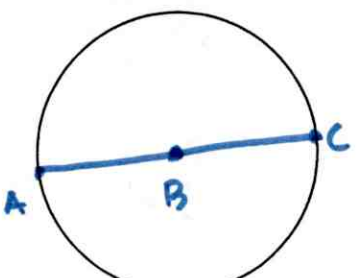
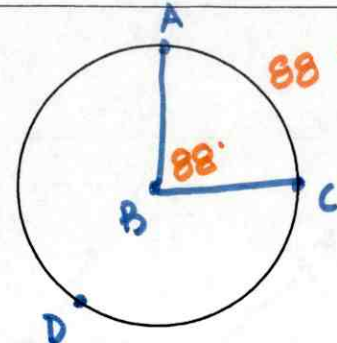
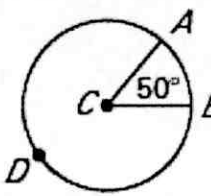
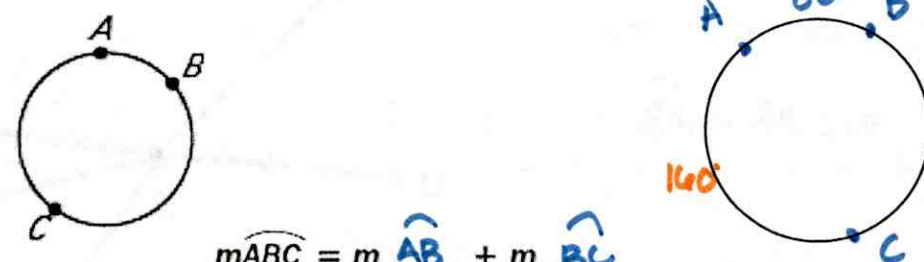


Find Arc Measures

Vocabulary	Definition	Example
<p>CENTRAL ANGLES</p>	<p>A central angle of a circle is an angle whose vertex is the center of the circle.</p>	 <p><math>\angle ABC</math> is a central angle of <math>\odot B</math>.</p> <p><math>160^\circ + 200^\circ = 360^\circ</math></p>
<p>MINOR ARC</p> <p><math>\widehat{AB}</math></p>	<p>Part of a circle measuring less than <math>180^\circ</math>.</p> <p>arc <math>AB = \widehat{AB}</math></p>	 <p><u>minor Arcs</u></p> <ul style="list-style-type: none"> <li><math>\widehat{UL}</math></li> <li><math>\widehat{LI}</math></li> <li><math>\widehat{LI}</math></li> <li><math>\widehat{LI}</math></li> <li><math>\widehat{LI}</math></li> <li><math>\widehat{UN}</math></li> <li><math>\widehat{IA}</math></li> <li><math>\widehat{IAN}</math></li> <li><math>\widehat{AN}</math></li> </ul> <p><u>major Arcs</u></p> <ul style="list-style-type: none"> <li><math>\widehat{ULA}</math> or <math>\widehat{UIA}</math></li> <li><math>\widehat{ULN}</math></li> <li><math>\widehat{ANL}</math></li> <li><math>\widehat{ANI}</math> ...</li> </ul>
<p>MAJOR ARC</p>	<p>Part of a circle measuring between <math>180^\circ</math> and <math>360^\circ</math>.</p>	<p><math>\widehat{UN}</math></p> <p><math>\widehat{AU}</math> (<math>\widehat{ANU}</math>)</p>
<p>SEMICIRCLE</p>	<p>A semicircle is an arc with endpoints that are the endpoints of a diameter.</p>	 <p><math>\overline{AC}</math> is a diameter, then <math>\widehat{AC}</math> is a semicircle (<math>180^\circ</math>)</p>



<p>MEASURE of an ARC</p>	<p>The measure of an arc is the measure of its central angle.</p>	 <p> <math>m\angle ABC = m\widehat{AC}</math>  <math>m\angle ABC = 88^\circ</math>    <math>m\widehat{AC} = 88^\circ</math>  <math>m\widehat{ADC} = 360 - 88</math>  <math>m\widehat{ADC} = 272^\circ</math> </p>
<p>MEASURING ARCS</p>	<p>The measure of a minor arc is the measure of its central angle. The expression <math>m\widehat{AB}</math> is read as "the measure of arc AB."</p>	 <p> <math>m\widehat{AB} = 50^\circ</math>  <math>m\widehat{ADB} = 310^\circ</math> </p> <p> <math>m\widehat{CAB} = 160 + 80 = 240^\circ</math> </p>
<p>ARC ADDITION POSTULATE</p>	<p>The measure of an arc formed by two adjacent arcs is the sum of the measures of the two arcs.</p>	 <p> <math>m\widehat{ABC} = m\widehat{AB} + m\widehat{BC}</math> </p> <p> <math>m\widehat{ABC} = 80 + 120 = 200</math>  <math>m\widehat{AC} = 360 - 200 = 160</math> </p>

Find the measure of each arc of  $\odot C$ , where  $\overline{DF}$  is a diameter.

a.  $\widehat{DE}$

$= 117^\circ$

b.  $\widehat{DFE}$

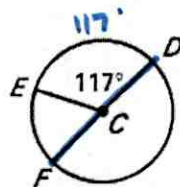
$= 360 - 117$   
 $= 243^\circ$

c.  $\widehat{DEF}$

$= 180^\circ$

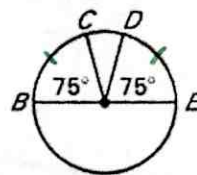
d.  $\widehat{EF}$

$= 180 - 117$   
 $= 63^\circ$



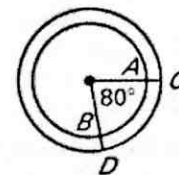
Tell whether the given arcs are congruent. Explain why or why not.

a.  $\widehat{BC}$  and  $\widehat{DE}$



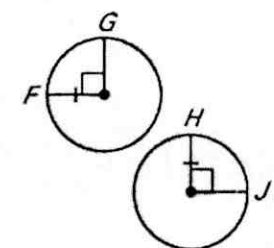
yes

b.  $\widehat{AB}$  and  $\widehat{CD}$



NO

c.  $\widehat{FG}$  and  $\widehat{HJ}$  be  $\cong$



yes

some measure and the radius must be  $\cong$