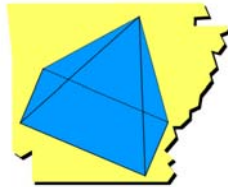


GEOMETRY AT ITS BEST



“The Magic of Central Angles”

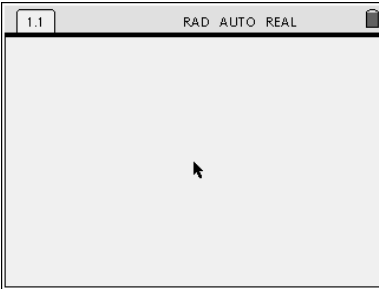
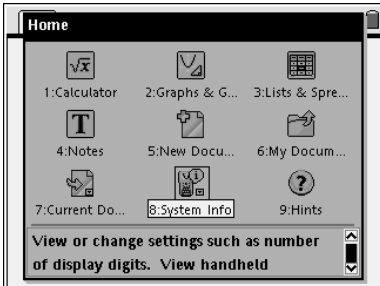
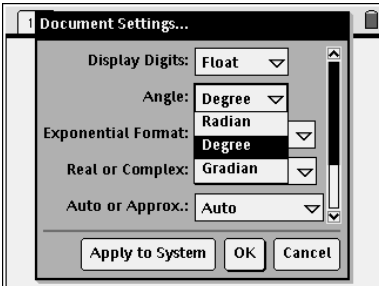
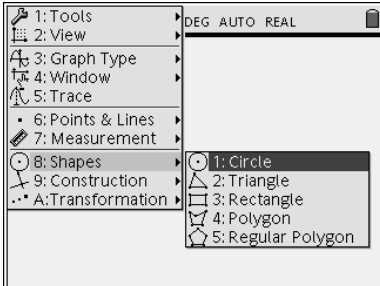
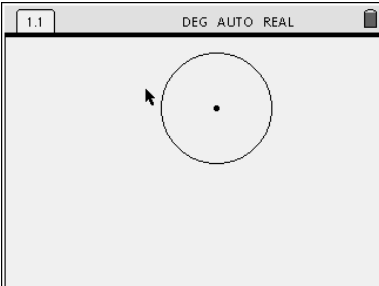
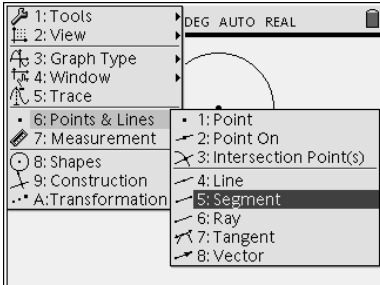
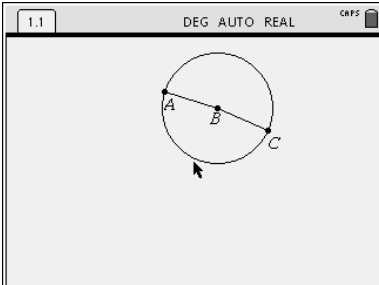
Created by Michelle Bonds

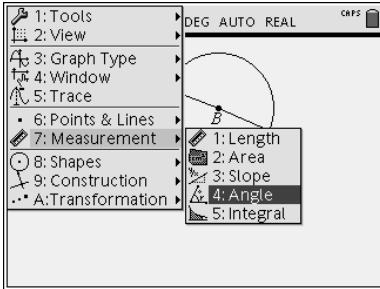
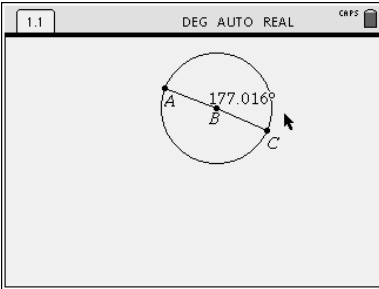
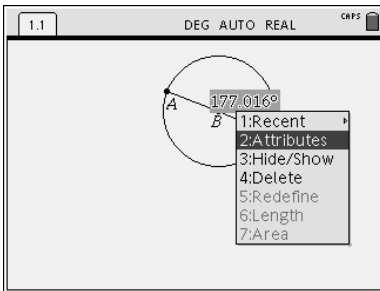
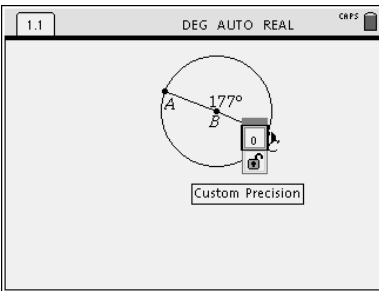
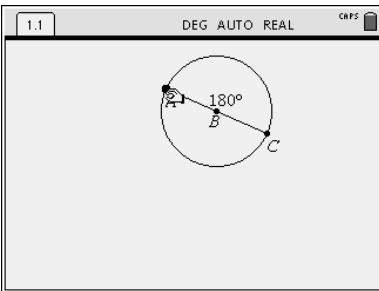
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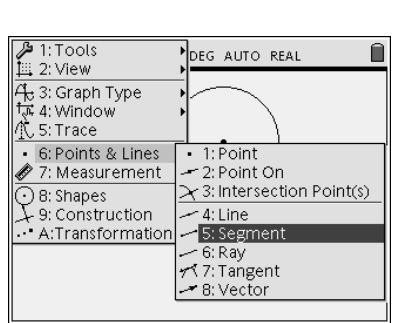
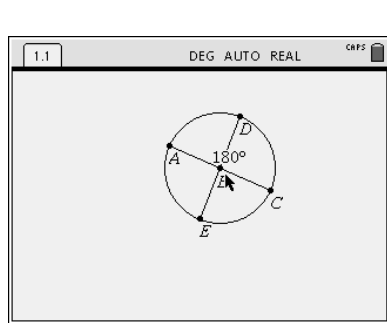
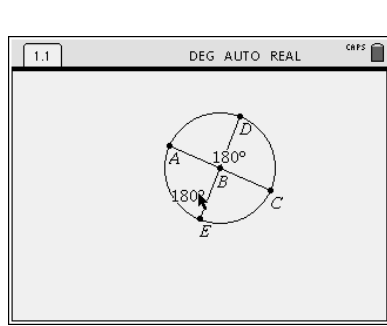
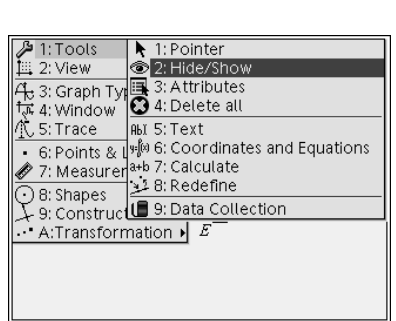
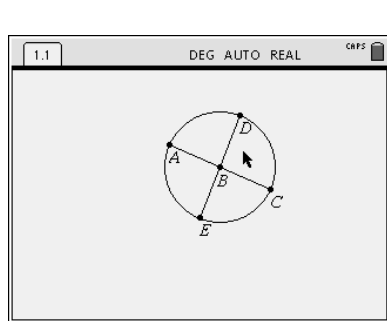
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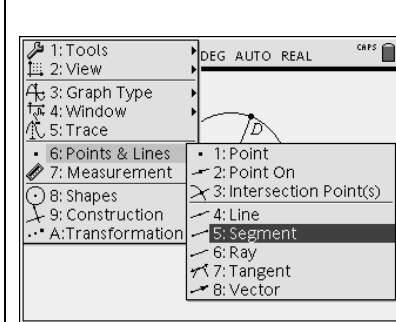
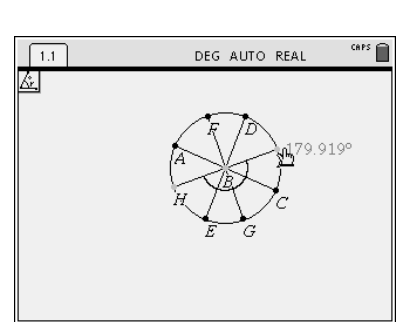
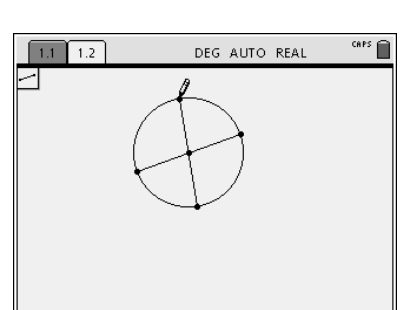
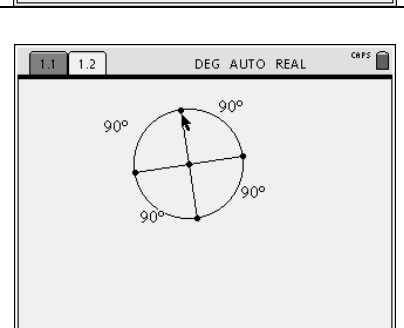
This activity allows students to investigate the relationship between central angles and the arcs they intercept.

Not responsible for misspelled words, mathematical mistakes, or anything else you might not like.

	<p>Open a Geometry page</p>	
	<p>Change the document settings to degrees by pressing Home 8 1 then tabbing to the Angle settings and changing it to degree.</p>	
	<p>Create a circle leaving room for calculations.</p>	
	<p>Create segment AB and BC with point B being the center of the circle. Label as you create to save time.</p>	

	<p>Measure $\angle ABC$. This is an example of a central angle.</p>	
	<p>Adjust the accuracy to the nearest degree by clicking on the measure and pressing ctrl menu 2 and using the Navpad to adjust the decimal places.</p>	
	<p>Move point A or B until the angle is 180° which forms the diameter of the circle.</p>	
	<p>How many degrees are in a circle? How many degrees are in the two arcs formed by the diameter?</p>	

	<p>Create segments DB and BE.</p>	
	<p>Measure central angle DBE, change the accuracy to the nearest degree, and move point D or E to form 180°.</p>	
	<p>What is the measure of each of the 4 central angles? How many degrees are each of the 4 arcs formed by the two diameters?</p>	
	<p>Hide the two measurements.</p>	

	<p>Create diameters FG and HI. Check for 180 degrees but don't set the measurements. Adjust the points until the angles are 180 degrees.</p>	
	<p>What do you think will be the measure of each of the central angles? the degree of each arc? What fraction of the circle is each arc?</p>	
	<p>Create a new Geometry page. Then construct a circle and two diameters.</p>	
	<p>Measure all four central angles. Adjust the accuracy to the nearest degree and adjust the angles to be 90 degrees each.</p>	

	<p>If each of the arcs is $\frac{1}{4}$ of the circle, what will their measures be?</p> <p>How does this compare to the central angles that intercept them?</p>	
	<p>Make a conjecture about central angles and the arcs they intercept.</p>	

Notes:

