

## Finding Arc Length of a Circle

**Content Standard:**

\*Students can find missing measures of two-dimensional figures.

**Directions:** Come up to the front to receive a piece of string, ruler, blank sheet of paper, and a geometer.

- 1) Draw a center point for your circle in the middle of the paper.
- 2) Use your piece of string to sketch a circle any size you choose (if you need to draw multiple practice circles in order to make a great one please do so on a separate sheet).
- 3) Draw in a radius and measure it in centimeters. Record this below.

$r =$  \_\_\_\_\_

- 4) Draw in a second radius. Measure the central angle formed between your two radii using your geometer (it should be less than 180 degrees). Record this central angle measure below.

Central Angle Measure = \_\_\_\_\_

- 5) Align the string on the minor arc then measure the string's length by placing the string up to the ruler. Record this measurement below.

Measured Minor Arc = \_\_\_\_\_

- 6) Now use the Arc Length Formula to calculate the length of the minor arc. Show all of your work below. How close was it to what you measured in question #5?

Calculated Minor Arc = \_\_\_\_\_

- 7) Make sure you turn your circle in when you turn this paper in.

Criteria	0	1	2	3
Sketched Circle	Poorly drawn circle	Circle drawn correctly		
Radii	Didn't sketch or sketched incorrect segment	Sketched correctly but measured incorrectly	Sketched correctly and measured correctly	
Central Angle	Didn't measure angle or measured incorrect angle	Measured angle correctly		
Measured Arc	Did not measure or measured incorrectly	Measured correctly		
Calculated Arc	Did not calculate	Used correct formula but incorrect variables	Used correct formula and correct variables but got incorrect answer	Used correct formula and got correct answer

Total Points: \_\_\_\_\_ / 8