

## Exploring Radian Measure

Materials:

- Cardstock
- Compasses
- Rulers
- Scissors
- Markers
- Non-stretchy string

Directions:

Construct a circle on the sheet of cardstock. Be sure to have a different radius than the people surrounding you. Mark the center and draw a radius.

Using the string, measure the length of the radius, marking its length on your string.

Beginning at the point where your radius intercepts the circle, wrap your string along the circumference of the circle and mark where one length of your radius ends. Beginning at this new point, measure another radius length along the circumference.

Continue to measure radius lengths around the circumference until you can determine approximately how many radius lengths form the circumference.

Does this number seem familiar to you?

Draw a radius to each of the marked points on the circumference, forming central angles.

How many of these central angles are there in the circle?

What is the approximate measure of this central angle?

Cut out one of your central angles. Compare it to other students' central angles.

What do you notice?

This angle measure is called 1 radian.

Draw a diagram that shows this information.