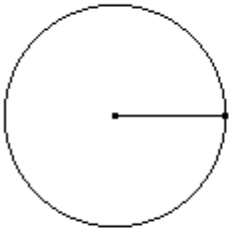
Alg 2 Trig
Radian Twist Tie Exploration – DAY 8

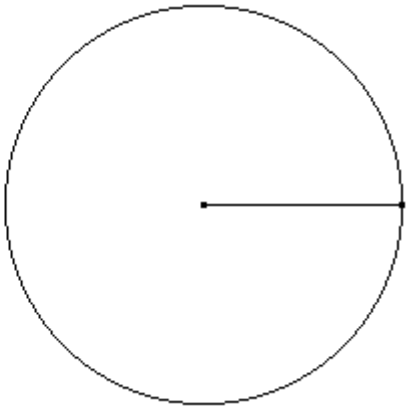
Name KEY

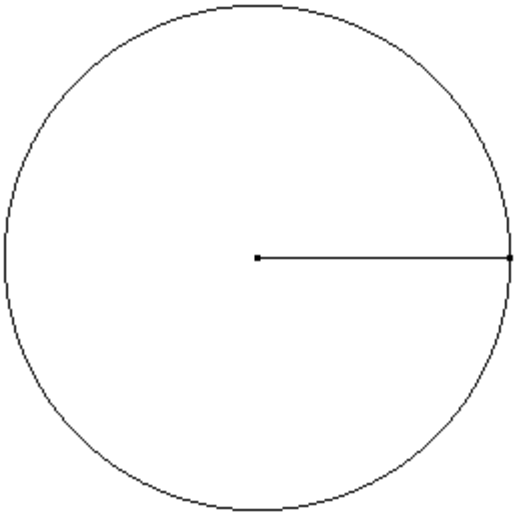
One radian = arc measure of an angle in standard position that is equal to the circle's radius.

Follow the steps of the exploration for each circle below to find the relationship between radians and degrees:

1. "Measure" the length of the circle's radius below using your twist tie.
2. "Measure" that length along the circle's arc.
3. Continue to mark off the radius length until you make one complete revolution around the circle.
4. Approximately, how many radius lengths did it take to complete the distance around the circle? A little over 6







The circumference around each circle was approximately equal to 6.2 or 2π radius lengths (also called radians)

One rotation around a circle is 360°.

Therefore, 2π r = 360°, or

π r = 180°