Ch. 11 Measurement of Figures and Solids

11.1 Circumference and Arc Length

- **Circumference**: the distance around a circle
  - The perimeter of a circle
  - To find: C = dπ or C = 2rπ

- **Arc Length**: distance on a circle: part of the circumference
  - Arc Length = $\frac{degree\ of\ arc}{360°} \cdot 2r\pi$

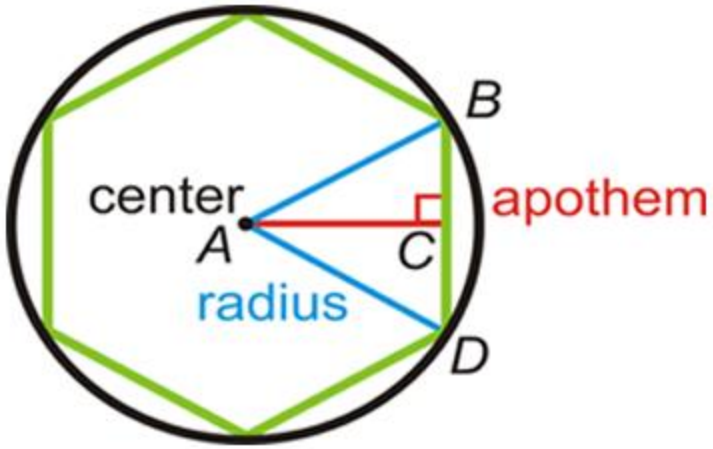
11.2 Area of Circles and Sectors

- **Area**: the amount of space inside a circle
  $A = \pi r^2$

- **Sector**: piece of the circle
- Area = $\frac{degree\ of\ arc}{360°} \cdot \pi r^2$

11.3 Area of Regular Polygons

- **Regular Polygon**: all angles congruent, all sides congruent



To Find lengths Use:

1. Pythagorean Thm
2. Special Triangles
3. Trig

$$\text{Area} = \frac{1}{2}(\text{Apothem} \times \text{Perimeter})$$

11.4 Use Geometric Probability

- **Probability**: the measure of the liklihood than an event will occur
  - Between 0 and 1
  - P(A)

Geometric Probability: ratio that involves a geometric measure like length or area

- 1. **Length**

  P(point on a segment) = $\frac{length\ of\ segment}{total\ length}$

- 2. **Area**

  P(point is a region) = $\frac{area\ of\ region}{total\ area}$