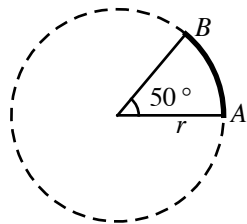


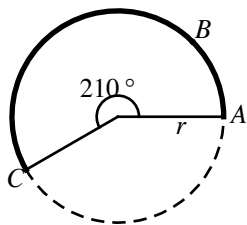
Trigonometry Assignment #1

Covers Circle Geometry Review

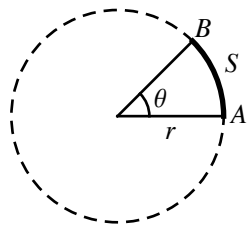
1. Given the length of arc ACB is 1.25 cm, find r .



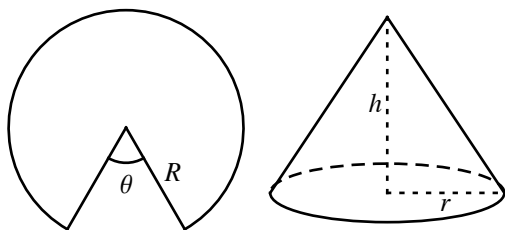
2. Given the length of arc ABC is $10''$, find r .



3. Given the circle below, if S is the length of arc AB, derive the formula for S .



4. [Challenge] A right circular cone is made from a piece of paper of radius R by cutting out a sector with angle θ and gluing the edges together. Tip: Try it!



- a. Find r , the radius of the base of the cone in terms of R and θ .
- b. Find h , the height of the cone in terms of R and θ .
5. [Challenge] Given a right circular cone with radius r and slant height L , show that the lateral surface area of the cone is $A = \pi r L$.
 Note: Lateral surface is the area of the cone that does **not** include the base.

