1. Solve for x:
   (a.) \( \frac{5x^3}{x^5} + 10 = 135 \)  
   (b.) \( \log (2x+8)^3 = 6 \)

2. Sketch and find the coordinates of the point corresponding to each angle on a circle of radius 3:
   A is at 390°
   B is at 495°
   C is at 690°

3. Convert 100° to radians.
4. Convert 2 radians to degrees.

5. Without using a calculator, what is the sign (positive or negative) of
   (a.) \( \cos 3 \)  
   (b.) \( \sin -4 \)

6. What is the angle determined by an arc of length 2\( \pi \) meters on a circle of radius 18 meters?

7. A revolving door (which rotates counterclockwise, see figure) was designed with five equally spaced panels for the entrance to the Pentagon. The arcs BC and AD have equal lengths.
   (a.) What is the angle in degrees between two adjacent panels?

   (b.) A four-star general enters by pushing on the panel at point B, and leaves at point D. What is the angle in degrees of rotation?

   (c.) With the door in the position shown in the figure, an admiral leaves the Pentagon by pushing the panel between A and D to point B. What is the angle in degrees of rotation?