For 1 – 6, find the circumference and the length of the darkened arc. C is the center of the circle. Leave your answers in terms of $\pi$.

1. Circumference = _________  
   Arc Length = _________

2. Circumference = _________  
   Arc Length = _________

3. Circumference = _________  
   Arc Length = _________

4. Circumference = _________  
   Arc Length = _________

5. Circumference = _________  
   Arc Length = _________

6. Circumference = _________  
   Arc Length = _________

7. If an arc has a measure of 97° and the circle has radius = 10, what is the arc length?

8. If an arc of 60° has arc length of $50\pi$, what is the circumference?

9. The circumference of a circle = $30\pi$. What is the diameter, radius, and the arc length of a 270° arc?

10. Find the coordinates of the center, radius, diameter, circumference, and the length of a 45° arc

   Center ( _____, _____ )
   Radius = _________
   Diameter = _________
   Circumference = _________
   45° Arc = _________