QUIZ 8

Name _____

1. Find the area outside the circle $r = 1$ and inside the cardiod $r = 1 + \sin\theta$.

2. Find the mass of a rod of length 10 cm with density $\delta(x) = e^{-x}$ gm/cm at a distance x cm from the left end of the rod.

3. The soot produced by a garbage incinerator spreads out in a circular pattern. The depth, $H(r)$, in millimeters, of the soot deposited each month at a distance r kilometers from the incinerator is given by $H(r) = 0.115e^{-2r}$. What is the total volume of soot inside a 5-kilometer radius?