

Fake Quiz 1 Calc 3 10/23/2015

This is a fake quiz, this is *only* a fake quiz. In the event of an actual quiz, you'd have been given fair warning. Repeat: This is *only* a fake quiz.

1. Find the center of mass of the cardioid $r = 1 - \sin \theta$.

2. Do #60 in §13.6.

3. A major city has a population varying linearly with distance from its center, with $\frac{1}{2}$ million people per square km at its center, dropping to $\frac{1}{4}$ million people per square km at a distance of 5km from the center.
- What's the total population living within 5km of the city's center?
 - Do more people live within 2km of the city's center, or between 2km and 5km?
 - In case of an epidemic, at which points in the city are people living within 1km of at least 1 million people?