

Homework 8, due Friday 3/10

1. p. 390, problems 1, 9, 13
2. p. 392, problems 19, 21
3. p. 392, problems 22, 24 (first sketch the regions)
4. p. 392, problem 23
5. p. 392, problem 26
6. The density of a ball is given by $\rho(x, y, z) = \sin(x^2 + y^2 + z^2)$. Find the x and the y -coordinates of the center of mass of the *upper hemisphere* of the ball of radius $\sqrt{\pi}$.
7. p. 404, problem 5
8. p. 405, problems 9, 10 (in both cases it's enough to find the x -coordinate of the center of mass)