

Math 335-002
Homework #12
March 12, 2008

1. Problems 2.9, 2.10, and 2.11 on p. 43.
2. Calculate the volume enclosed between the surfaces $x + y^2 \leq z \leq 0$, $x \geq -1$.
3. Calculate the mass of a paraboloid-shaped object defined by $z + x^2 + y^2 \leq 1$, $z \geq 0$, given the mass density $\rho(x, y, z) = z^2 + 1$
4. Calculate the mass of an object defined by $0 \leq z \leq 1 - x - 2y$, $x \geq 0$, and $y \geq 0$, with a mass density of $\rho(x, y, z) = y^2$