Math 223

Week 9 Homework due Thursday, October 28

Section 12.7, problems 3, 7, 11, 13, 15, 17, 19, 23, 25, 31, 35

Hints:

35. Sketch the region first. From the way the integral is set up, the region is bounded between the planes $x = 0$ and $x = 1$. Given a value of x in this region, y varies from 0 to $\sqrt{1 - x^2}$, which suggests the upper half of a circle in the xy-plane. Given a value of x and y, the z coordinate varies from $z = \sqrt{x^2 + y^2}$ to $z = \sqrt{2 - x^2 - y^2}$, which appears to be the gap between a cone and a sphere.