Math 241 C8   **Name:**

Quiz # 6

April 10, 2013

No electronic devices, notes, or interpersonal communication allowed.

Show work to get credit.

(1) [10pts] Find the volume of the region bounded by the sphere $x^2 + y^2 + z^2 = 4$ and the cone $z = \sqrt{x^2 + y^2}$.

(2) [10pts] Compute $\iiint_R z \, dx \, dy \, dz$, where R is the region bounded by the planes $z = 2x - 1$, $z = 2x + 3$, $y = x$, $y = x + 1$, $y = 2x + 2$, and $y = 2x + 5$.