Name:
July 9, 2015
MAC 2313.8326
Cyr

Quiz 8
You must show all work to receive full credit!!

Problem 1. (3 pts) Evaluate by first changing the order of integration: $\int_0^4 \int_{\sqrt{y}}^2 \sqrt{x^3+1}\, dxdy$.
(You may find it helpful to sketch the domain of integration.)

Problem 2. (4 pts) Set up the triple integral that would be used to calculate the volume of the region in the first octant ($x \geq 0, y \geq 0, z \geq 0$) above $z = y^2$ and below $z = 8-2x^2-y^2$. DO NOT EVALUATE.

Problem 3. (3 pts) Evaluate by first changing to polar coordinates: $\int_0^3 \int_0^{\sqrt{9-y^2}} \sqrt{x^2+y^2}\, dxdy$.
(You may find it helpful to sketch the domain of integration.)