

Math 53 DIS 108/109

Quiz: April 3, 2015

Name: _____

Show your work fully for all questions. Quiz has **front** and **back** sides.

Problem 1: evaluate $\iiint_E e^{(x^2+y^2+z^2)^{\frac{3}{2}}} dV$ where E is the portion of the unit ball $x^2+y^2+z^2 \leq 1$ that lies in the first octant.

Problem 2: Use the transformation $u = xy$, $v = xy^2$ to evaluate $\iint_R y^2 dA$ where R is the region bounded by the curves $xy = 1$, $xy = 2$, $xy^2 = 1$, $xy^2 = 2$.