

Math 225: Calculus III
Quiz 9 Nov. 17/19, 1992

Name: _____

Section: _____

1. Compute the volume of the portion of the solid sphere $x^2 + y^2 + z^2 \leq 2$ that lies above the plane $z = 1$.

2. Compute the Jacobian $\frac{\partial(x,y)}{\partial(u,v)}$ of the change of variables

$$x = e^{-u} \cos(v), \quad y = e^{-u} \sin(v)$$