MATH 210 **QUIZ 3** **FALL 1991**

Professor Ronan Friday, November 1 – 9:00 A.M.

NAME: (PRINT)_____ SSN: _____

1. Evaluate $\iint_D \frac{x^2+y^2}{1+x^2+y^2} dA$ where D is the region in the first quadrant interior to the circle of unit radius. Thus: $x^2+y^2 \leq 1$, $x \geq 0$, $y \geq 0$.

2. Evaluate $\iiint_E xy \, dV$ where E is the solid tetrahedron with vertices (0,0,0), (1,0,0), (0,2,0) and (0,0,3).

3. Find the center of mass of the volume above the paraboloid $z = x^2 + y^2$ and below the plane $z = 1$. Thus $x^2 + y^2 \leq z \leq 1$.