Math 225: Calculus III   Name:_____

Quiz 7   *Mar. 25/27, 1997*   Section:_____

1. Calculate the integral of $f(x, y) = \sin[\pi(x^2 + y^2)]$ over the unit disk, $x^2 + y^2 \leq 1$.

2. Find the average height of points in the bottom corner of a unit cube. The corner is defined to be the solid region below the plane $x+y+z = 1$ in the first octant. Its volume is $1/6$. The height function is, of course, $f(x, y, z) = z$.