

Math 53, Spring 2000, sections 107 & 109
Quiz #7, 10 March

Name_____

Instructions: You have 15 minutes in which to answer the following two questions. No calculators, notes, or other references may be used.

1. (6 points) Find the integral of the function $f(x, y) = x \cos(xy)$ over the region $R = \{(x, y) : \frac{\pi}{2} \leq x \leq \pi, 0 \leq y \leq \frac{1}{2}\}$.

Hint: One order of integration is easier than the other.

2. (4 points) Find the volume of the region bounded by the surfaces defined by the equations $x = -1$, $x = 2$, $y = 2$, $y = 3$, $z = 0$, and $z = x^2 + y^2$.