Quiz 9 **Calculus 3** **11/21/2006**

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Parametrize and give bounds for the rectangle with vertices (0,0,0), (0,2,0), (0,2,5), and (0,0,5).

$x(u,v) = 0$

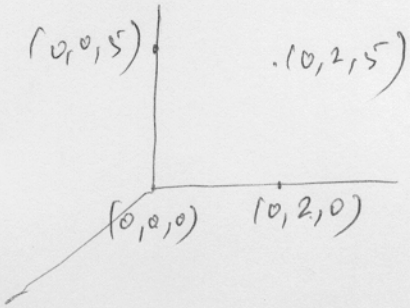
$y(u,v) = u$

$z(u,v) = v$

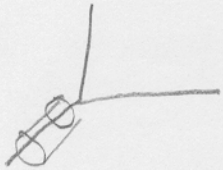
$0 \le u \le 2$

$0 \le v \le 5$

Excellent



2. Parametrize and give bounds for the portion of the cylinder with radius 2 centered around the x-axis between $x = 1$ and $x = 2$.



$x(u,v) = u$ $\quad 1 \le u \le 2$

$y(u,v) = 2\cos v$ $\quad 0 \le v \le 2\pi$

$z(u,v) = 2\sin v$

Great