MATH 261 Quiz 14 Name: .
Class time:

Show all work. 5 points each.

1) Set up the surface integral $\iint_S yz\, dS$ where S is the part of the plane $x + y + z = 1$ that lies in the first octant.

2) Set up the surface integral $\iint_S \mathbf{F} \cdot d\mathbf{S}$ where $\mathbf{F} = \langle xy, yz, zx \rangle$ and S is the part of the paraboloid $z = 4 - x^2 - y^2$ that lies above the square $0 \leq x \leq 1$, $0 \leq y \leq 1$.