MATH 261 Quiz 13 Name: .
Student number:

Show all work. 5 points each.

1. Find the area of the surface $z = xy$ inside the cylinder $x^2 + y^2 = 1$.

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