

Quiz 5**Calculus 3****Due 11/19/03**

Each problem is worth 5 points. For full credit indicate clearly how you reached your answer.

1. Find the surface area of a sphere with radius 1 using the formula from section 16.6.

2. Compute $\iint_S \mathbf{F} \cdot d\mathbf{S}$ where $\mathbf{F}(x,y,z) = \langle 2x, -z, y \rangle$ and S is the portion of $x = 4 - y^2 - z^2$ within the cylinder $y^2 + z^2 = 4$.