MATH 261 Quiz 9 Name:
Student number:

Show all work. 5 points each.

1. Change the integral into polar coordinates and include limits of integration. Do not evaluate. $\iint_D e^{-x^2-y^2} dA$ where $D = \{(x, y) | y \geq 0,\ x^2 + y^2 \leq 4\}$.

2. Change the integral into cylindrical coordinates and include limits of integration. Do not evaluate. $\iiint_E 1 dV$ where $E = \{(x, y, z) | -2 \leq x \leq 2,\ -\sqrt{4 - x^2} \leq y \leq \sqrt{y - x^2},\ \sqrt{x^2 + y^2} \leq z \leq 2\}$.