

Show all work. 5 points each.

1) Evaluate the integral  $\iiint_E 2x \, dV$  where  $E = \{(x, y, z) | 0 \leq y \leq 2, 0 \leq x \leq \sqrt{4 - y^2}, 0 \leq z \leq y\}$ . Leave your answer at the last evaluation bar.

2) SET UP the integral for finding the surface area of the part of the paraboloid  $z = 4 - x^2 - y^2$  that lies above the  $xy$  plane. Ok to do in polar or rectangular coordinates.