INSTRUCTIONS: SHOW YOUR WORK. Grading is on the basis of 10 points per NET. You may use books, computers, calculators, etc., but you must show all steps. You may not use any outside human help. See me alone for hints. Neatness will be “added or subtracted!” BE NEAT!

If you cannot make it to class, have someone else bring it and turn it in to the “front desk” in the Science/Math Office. They have a time stamp. It must be stamped before 1:25 pm on the date it is due. Or you may fax it to me at 850-201-8119 (fax must be received before class period).

You may write on this page and attach extra pages, as necessary. Do not ever write on the back of a page or in the top margin or left margin. Box your answer.

NET #06: The formula for a triple integral in cylindrical coordinates is

\[
\iiint_E f(x, y, z) \, dV = \int_\theta=\alpha^\beta \int_{r=h_1(\theta)}^{h_2(\theta)} \int_{z=u_1(r, \theta)}^{z=u_2(r, \theta)} f(r \cos \theta, r \sin \theta, z) \, r \, dz \, dr \, d\theta , \quad \text{p. 1069.}
\]

Use this formula to evaluate \( \iiint_E x \, dV \) where \( E \) is the solid enclosed by the planes \( z = 0 \) and \( z = 4 \) and by the cylinders \( x^2 + y^2 = 1 \) and \( x^2 + y^2 = 4 \).

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