Math 324B Quiz 2

NAME:

Question 1

Set up completely this integral in CYLINDRICAL COORDINATES but *DO NOT EVALUATE***.**

Set up $\int\int\int_D xydV$, where D is the part of the solid bounded by $2x^2 + 2y^2 - z = 0$ and $x^2 + y^2 + z = 12$ that is contained in the first octant.

(To repeat, take the solid between the two surfaces and then integrate only over the part of the solid in the first octant, i.e., where x, y, z are all nonnegative.)

Question 2

Set up completely this integral in CARTESIAN COORDINATES (i.e., x, y, z coordinates) but *DO NOT EVALUATE* **.**

Set up the integral $\int\int\int_S xydV$, where S is the solid bounded by the planes given by these equations: $z = 0, x = 0, x + y + z = 1, x - y + z = 1$.