Name:

Math 208, Section 3

Quiz number 8

Show all work. How you get your answer is just as important, if not more important, than the answer itself. If you think it, write it!

The region W pictured below consists of that part of the inside of the sphere of radius 3 which lies in the first octant in 3-space.

Set up **but do not compute** the integral of the function $f(x, y, z) = x$ over the region W, using

(a) cylindrical coordinates

(b) spherical coordinates .