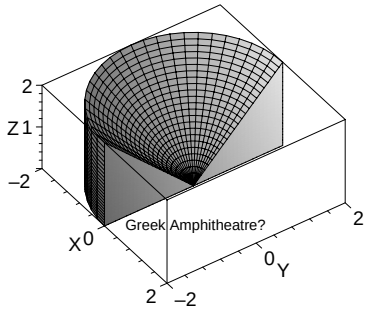
MAC 2313 Cal3 **Quiz 8** 25 Mar 2003 **Name:** _____

Show **ALL** work for credit; be neat. Calculators can be used for graphing and calculating only. Give exact answers when possible.

1. For the region W below write but do not evaluate the triple integral for $\iiint_W f \; dV$ in the following coordinate systems (a) Cartesian (b) Cylindrical (c) Spherical.



2. Find $\int_C \mathbf{F} \cdot d\mathbf{r}$ for the given $\mathbf{F} = \langle x^3, y^2, z \rangle$ and C is the line from the origin to the point $(2, 3, 4)$.