Q1) Sketch the solid and set up an integral in cylindrical coordinates to find volume that lies within both the cylinder \( x^2 + y^2 = 1 \) and the sphere \( x^2 + y^2 + z^2 = 4 \).

Q2 Sketch the solid and the region and change to cylindrical coordinates \( \iiint_{-1}^{1} \int_{-\sqrt{1-y^2}}^{\sqrt{1-y^2}} \int_{-\sqrt{1-z^2}}^{\sqrt{1-z^2}} xzdzdx dy \)