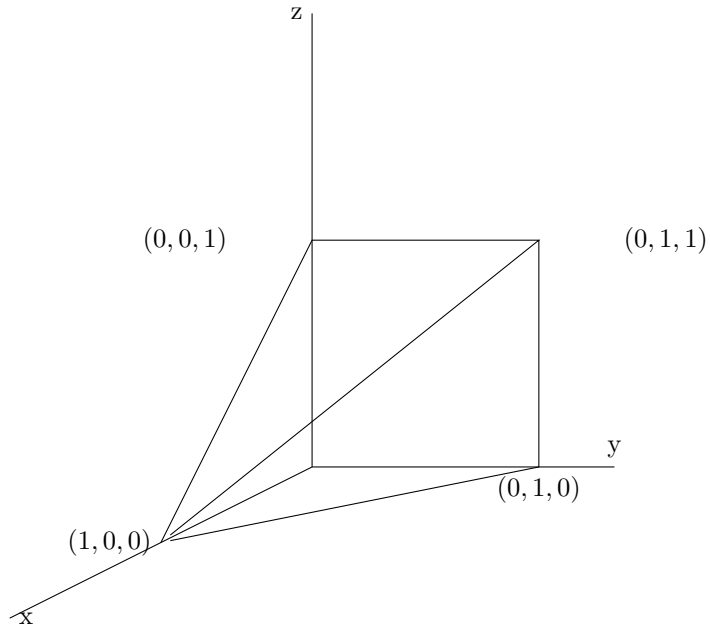0.1. **Setting up triple integrals.** Suppose the density of the following solid is given by $\rho(x, y, z) = x + y$.

Set up an integral which computes the mass of the object.

0.2. **Cylindrical Coordinates.** Compute the integral of the function $f(x, y, z) = z + x^2 + y^2$ over the region constrained by $0 \leq z \leq 1 - (x^2 + y^2)$. Use cylindrical coordinates.