

The solid E is most conveniently described if we use cylindrical coordinates:

$E = \{(r, \theta, z) \mid 0 \leq \theta \leq \frac{\pi}{2}, 0 \leq r \leq 6, 0 \leq z \leq 6\}$. Then

$$\iiint_E f(x, y, z) dV = \int_0^{\pi/2} \int_0^6 \int_0^6 f(r \cos(\theta), r \sin(\theta), z) r dz dr d\theta.$$