

**Multiple Integration**  
*Iteration of Double Integrals*

**Question**

Find the volume of the given solid

Below  $z = 1 - x^2$  and over the region  $0 \leq x \leq 1, 0 \leq y \leq x$ .

**Answer**

$$\begin{aligned} V &= \int_0^1 dx \int_0^x (1 - x^2) dy \\ &= \int_0^1 (1 - x^2)x dx \\ &= \frac{1}{2} - \frac{1}{4} = \frac{1}{4} \text{cu. units} \end{aligned}$$