Triple Integrals

Question

The figure shows a solid bound by the planes $x + z = 1$, $z = 0$, $x = 0$, and $y = 1$, along with the surface $y = 2 - x^2$. Which of the these iterated triple integrals computes its volume?

A. $\displaystyle\int_0^1 \int_0^{2-x^2} \int_0^{1-x} dz\, dy\, dx$

B. $\displaystyle\int_0^1 \int_1^{1-x} \int_0^{2-x^2} dz\, dy\, dx$

C. $\displaystyle\int_0^1 \int_1^{2-x^2} \int_0^{1-x} dz\, dy\, dx$

D. $\displaystyle\int_0^1 \int_0^{1-x} \int_0^{2-x^2} dz\, dy\, dx$