

C/

Curvas $\begin{cases} y = x^2 \\ E.R. x \quad (y=0) \\ x=1 \end{cases}$

EJE R. $y=2$ (horizontal)

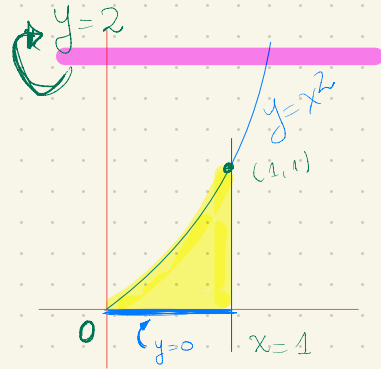
Solución

ANILLO $\begin{cases} y=f(x) \\ E.R. \text{ horizontal} \end{cases}$ ó CAPAS $\begin{cases} x=g(y) \\ E.R. \text{ horizontal} \end{cases}$

ANILLO

1º Intersección

$$\begin{aligned} y = x^2 \wedge y = 0 & \quad \left\{ \begin{aligned} y = x^2 \wedge x = 1 \\ y = (1)^2 \\ y = 1 \end{aligned} \right. \\ 0 = x^2 \\ 0 = x \end{aligned}$$



2º Volumen

$$V(s) = \pi \int_0^1 [(10-2)^2 - (x^2-2)^2] dx$$

$$V(s) = \pi \int_0^1 (4 - x^4 + 4x^2 - 4) dx$$

$$V(s) = \pi \int_0^1 (-x^4 + 4x^2) dx$$

$$V(s) = \pi \left[-\frac{x^5}{5} + \frac{4x^3}{3} \right]_0^1$$

$$V(s) = \pi \left(-\frac{1}{5} + \frac{4}{3} \right) = \frac{17}{15} \pi \text{ u}^3$$