$$G(x) = \int_0^{x^2} F(T) \cdot dT \qquad F(T) = \begin{cases} T+1 & T \leq 1 \\ \dfrac{1}{T^2} & T > 1 \end{cases}$$

LAUREANO ENRIQUE

$$\int_0^1 F(T) \qquad T^2 + T \quad + \int_1^{x^2} F(T)$$

$$T^2 + 1 \Big|_0^1 \quad + \left(-\frac{1}{T}\right) \Big|_1^{x^2}$$

$$\cancel{T^2 1,}\ \ \cancel{1^2+1} \ + \ \frac{-1}{x^2} - 1$$

$$G(x) = \frac{-1}{x^2}$$

B) $\dfrac{-1}{x^2}$ CONTINUA EN $x = 1$, NO SE CANCELA

C) $$\int_1^{+\infty} F(T) \cdot dT = -\frac{1}{T} \Big|_{1^+}^{\infty} \quad \lim_{x \to 1^+} = \cancel{\frac{-1}{\infty}} - \cancel{\left(-\frac{1}{x}\right)}$$

$$\cancel{0} \quad \cancel{+} \quad \cancel{1}$$

$$\int \qquad \frac{-1}{T} = \frac{-1}{\infty} - \left(T^2 + T\right)$$

$$\lim_{T \to \infty} \frac{-1}{\infty} - (2) \qquad \downarrow 2$$

$$0 - 2 = -2$$

LAURIANO
ENRIQUE

$12\pi = 2\pi r^2 + 2\pi . r . H$ $\qquad V = \pi r^2 H$

$12\pi = 2\pi r^2 + 2\pi r H$

$\frac{12\pi - 2\pi r^2}{2\pi r} = 2\pi r H$ $\qquad 6\pi - r^2 = r H$

$\frac{12\pi - 2\pi r^2}{2\pi r} = 3$

$V = \pi . r^2 . \left(\frac{12\pi - 2\pi r^2}{2\pi R}\right)$ $\qquad \frac{\pi r^2 . 12\pi - 2\pi r^2}{2\pi R}$

$\pi r \left(\frac{12\pi - 2\pi r^2}{2}\right)$ $\quad R \left(6\pi - \pi r^2\right)$

$6\pi r - \pi r^3$

$\frac{Dv}{Dr} = 6\pi - 3\pi r^2 = 0$ $\qquad 6\pi = 3\pi r^2$

$R = \sqrt{2}$

$\downarrow$

radio

$12\pi = 2\pi r^2 + 2\pi r H$

$12\pi = 2\pi 2 + 2\pi \sqrt{2} . H$

$12\pi - 4\pi = 2\pi \sqrt{2} . H$

$\frac{8\pi}{2\pi\sqrt{2}} = H \rightarrow$ altura