

EJERCICIO M2BE3383:

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$$\int \frac{x}{\sqrt{x+1}} dx =$$

i CAMBIO DE VARIABLE!
 $x+1 = t^2 \rightarrow x = t^2 - 1$
 $dx = 2t dt \rightarrow \sqrt{x+1} = t$

$$= \int \frac{t^2 - 1}{\sqrt{t^2}} 2t dt = \int \frac{t^2 - 1}{t} \cdot 2t dt =$$

$$= 2 \int (t^2 - 1) dt = 2 \int t^2 dt - 2 \int dt =$$

$$= 2 \frac{t^3}{3} - 2t = 2 \frac{\sqrt{x+1}^3}{3} - 2\sqrt{x+1} =$$

$$= \boxed{\frac{2}{3} (x+1) \sqrt{x+1} - 2\sqrt{x+1} + C}$$