- $\int \frac{x}{\sqrt{x+1}}\,dx$ Utilizar C.V.

$$\int \frac{x}{\sqrt{x+1}}\,dx = \int \frac{t^2-1}{\sqrt{t^2}}\,2t\,dt = 2\int (t^2-1)\,dt = (*)$$

$$x+1 = t^2$$
$$x = t^2-1$$
$$dx = 2t\,dt$$

$$x+1 = t^2 \Rightarrow t = \sqrt{x+1}$$

$$(*) = 2\left[\frac{t^3}{3} - t\right] + C = 2\left[\frac{\sqrt{(x+1)^3}}{3} - \sqrt{x+1}\right] + C$$

$$\int t^n\,dt = \frac{t^{n+1}}{n+1} + C \quad t \neq -1$$