$\int x\sqrt{x+1}\,dx$; Utilizar c.v.

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

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

$$\int t^n dt = \frac{t^{n+1}}{n+1} + c$$

$$\circledast = 2\int (t^2-1)\,t^2\,dt = 2\int (t^4 - t^2)\,dt =$$

$$= 2\left(\frac{t^5}{5} - \frac{t^3}{3}\right) + c = 2\left(\frac{\sqrt{(x+1)^5}}{5} - \frac{\sqrt{(x+1)^3}}{3}\right) + c$$

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