Integral Indefinida - Cambio de variable

Bytellant

$$\int \frac{dx}{(1+x)^{\frac{3}{2}}(1+x)^{\frac{1}{2}}} = \int (1+x)^{-\frac{3}{2}}(1+x)^{-\frac{1}{2}}\,dx$$

$u = 1+x$

$du = 0 + 1\,dx$

$dx = du$

$$\int u^{-\frac{3}{2}} u^{-\frac{1}{2}}\,du$$

$$\int u^{-\frac{4}{2}}\,du = \int u^{-2}\,du$$

$$* \int u^n = \frac{u^{n+1}}{n+1}$$

$$= \frac{u^{-1}}{-1} = -u^{-1} = -\frac{1}{u} + C$$

$u = 1+x$

$$= -\frac{1}{1+x} + C$$