Integral Indefinida - Cambio de variable

Bit Planet

Solución $\int \tan x \, dx$

$= \int \frac{\operatorname{sen} x}{\cos x} \, dx$

$u = \cos x$

$du = -\operatorname{sen} x \, dx$

$* \frac{du}{-\operatorname{sen} x} = dx$

$= \int \frac{\operatorname{sen} x}{u} \frac{du}{-\operatorname{sen} x} = \int -\frac{\operatorname{sen} x}{u \operatorname{sen} x} du = \int \frac{1}{-u} du$

$= -\int \frac{1}{u} du = -\ln|u| + C$

$= -\ln|\cos x| + C$ //

Identidad trigonométrica

$* \tan x = \frac{\operatorname{sen} x}{\cos x}$

$* \frac{d}{dx} \cos x = -\operatorname{sen} x$

$* \int \frac{1}{x} dx = \ln|x|$

$* u = \cos x$