

Primitive delle funzioni elementari e di alcune altre funzioni

$\int x^a dx = \frac{x^{a+1}}{a+1} + C \quad (a \in \mathbb{R}, a \neq -1)$	$\int \sinh x dx = \cosh x + C$
$\int \frac{1}{x} dx = \log x + C$	$\int \cosh x dx = \sinh x + C$
$\int e^x dx = e^x + C$	$\int \tanh x dx = \log(\cosh x) + C$
$\int \log x dx = x \log x - x + C$	$\int \frac{1}{x^2 + 1} dx = \arctan x + C$
$\int \sin x dx = -\cos x + C$	$\int \frac{1}{\sqrt{1-x^2}} dx = \arcsin x + C$
$\int \cos x dx = \sin x + C$	$\int \frac{1}{\sqrt{x^2+1}} dx = \log(x + \sqrt{x^2+1}) + C$
$\int \tan x dx = -\log \cos x + C$	$\int \frac{1}{\sqrt{x^2-1}} dx = \log x + \sqrt{x^2-1} + C$

Dati $a, b, c \in \mathbb{R}$, con $a \neq 0$, si ha (ponendo $\Delta = b^2 - 4ac$)

$\int \frac{1}{ax^2 + bx + c} dx = \frac{2}{\sqrt{-\Delta}} \arctan \left(\frac{2ax + b}{\sqrt{-\Delta}} \right) + C$	<p style="text-align: right;">se $\Delta < 0$</p>
$\int \frac{1}{\sqrt{ax^2 + bx + c}} dx = \frac{1}{\sqrt{a}} \log \left 2ax + b + \sqrt{4a(ax^2 + bx + c)} \right + C$	<p style="text-align: right;">se $a > 0$ e $\Delta \neq 0$</p>
$\int \frac{1}{\sqrt{ax^2 + bx + c}} dx = -\frac{1}{\sqrt{ a }} \arcsin \left(\frac{2ax + b}{\sqrt{\Delta}} \right) + C$	<p style="text-align: right;">se $a < 0$ e $\Delta > 0$</p>