

Integrales

Reglas de integrales:

$\int (f+g)(x) \, dx = \int f(x) \, dx + \int g(x) \, dx$
$\int (f-g)(x) \, dx = \int f(x) \, dx - \int g(x) \, dx$
k constante, $\int k * f(x) \, dx = k * \int f(x) \, dx$
$F'(x) = f(x)$, $\int f(g(x)) \, g'(x) \, dx = F(g(x)) + c$ $u = g(x)$, $du = g'(x) * dx$
f' y g' continuas, $\int f(x) * g'(x) \, dx = f(x) * g(x) - \int f'(x) * g(x) \, dx$

Tabla de integrales:

$f(x) = 0$	$\int f(x) \, dx = c$
$f(x) = x^r$	$\int f(x) \, dx = x^{r+1} / (r+1) + c$
$f(x) = 1/x$, $x \neq 0$	$\int f(x) \, dx = \ln(x) + c$
$f(x) = \cos(x)$	$\int f(x) \, dx = \text{sen}(x) + c$
$f(x) = \text{sen}(x)$	$\int f(x) \, dx = -\cos(x) + c$
$f(x) = e^x$	$\int f(x) \, dx = e^x + c$
$f(x) = a^x$, $a > 0$	$\int f(x) \, dx = a^x / \ln(a) + c$
$f(x) = 1 / \sqrt{1-x^2}$, $-1 \leq x \leq 1$	$\int f(x) \, dx = \arcsen(x) + c$ $\int f(x) \, dx = -\arccos(x) + c$
$f(x) = 1 / (1 + x^2)$	$\int f(x) \, dx = \arctan(x) + c$