

REGLAS DE INTEGRACIÓN

Suma y resta	$\int (f+g) = \int f + \int g$	$\int (f-g) = \int f - \int g$
Producto y cociente por una constante $a$	$\int (a \cdot f) = a \int f$	$\int \frac{f}{a} = \frac{1}{a} \int f$

TABLA DE INTEGRALES INMEDIATAS

TIPOS	FORMAS	
	SIMPLES	COMPUESTAS
Potencial $a \neq -1$	$\int x^a dx = \frac{x^{a+1}}{a+1}$ $\int 1 dx = x$	$\int f^a \cdot f' dx = \frac{f^{a+1}}{a+1}$
Logarítmico	$\int \frac{1}{x} dx = \ln x $	$\int \frac{f'}{f} dx = \ln f $
Exponencial	$\int e^x dx = e^x$ $\int a^x dx = \frac{a^x}{\ln a}$	$\int e^f \cdot f' dx = e^f$ $\int a^f \cdot f' dx = \frac{a^f}{\ln a}$
Seno	$\int \cos x dx = \text{sen } x$	$\int \cos f \cdot f' dx = \text{sen } f$
Coseno	$\int \text{sen } x dx = -\cos x$	$\int \text{sen } f \cdot f' dx = -\cos f$
Tangente	$\int \sec^2 x dx = \text{tg } x$ $\int (1 + \text{tg}^2 x) dx = \text{tg } x$ $\int \frac{1}{\cos^2 x} dx = \text{tg } x$	$\int \sec^2 f \cdot f' dx = \text{tg } f$ $\int (1 + \text{tg}^2 f) \cdot f' dx = \text{tg } f$ $\int \frac{f'}{\cos^2 f} dx = \text{tg } f$
Cotangente	$\int \text{cosec}^2 x dx = -\text{cotg } x$ $\int (1 + \text{cotg}^2 x) dx = -\text{cotg } x$ $\int \frac{1}{\text{sen}^2 x} dx = -\text{cotg } x$	$\int \text{cosec}^2 f \cdot f' dx = -\text{cotg } f$ $\int (1 + \text{cotg}^2 f) \cdot f' dx = -\text{cotg } f$ $\int \frac{f'}{\text{sen}^2 f} dx = -\text{cotg } f$
Arco seno	$\int \frac{1}{\sqrt{1-x^2}} dx = \arcsen x$ $\int \frac{1}{\sqrt{a^2-x^2}} dx = \arcsen \frac{x}{a}$	$\int \frac{f'}{\sqrt{1-f^2}} dx = \arcsen f$ $\int \frac{f'}{\sqrt{a^2-f^2}} dx = \arcsen \frac{f}{a}$
Arco tangente	$\int \frac{1}{1+x^2} dx = \text{arctg } x$ $\int \frac{1}{a^2+x^2} dx = \frac{1}{a} \text{arctg } \frac{x}{a}$	$\int \frac{f'}{1+f^2} dx = \text{arctg } f$ $\int \frac{f'}{a^2+f^2} dx = \frac{1}{a} \text{arctg } \frac{f}{a}$
Neperiano-arco tangente	$\int \frac{Mx+N}{ax^2+bx+c} dx$ $ax^2+bx+c$ irreducible	

INTEGRACIÓN POR PARTES

$$\int u \cdot dv = u \cdot v - \int v \cdot du$$