Integrales

$\int dx / \operatorname{Sen} x$	$\operatorname{Ln}\left[\operatorname{Tg}\frac{x}{2}\right] + C$
$\int dx / \operatorname{Cos} x$	$\operatorname{Ln}\left[\operatorname{Tg} x + \left(\frac{1}{Cosx}\right)\right] + C$
$\int dx / \operatorname{Cos}^2 x$	$\operatorname{Tg} x + C$
$\int dx / \operatorname{Sen}^2 x$	$-\operatorname{Cotg} x + C$
$\int e^x dx$	$e^x + C$
$\int dx / x$	$\operatorname{Ln}[x] + C$
$\int u\,dv$	$u \cdot v - \int v \cdot du$
$\int a^x dx$	$\frac{a^x}{Ln\ a} + C$
$\int \operatorname{Ln} x\,dx$	$x \cdot (\operatorname{Ln} x - 1) + C$
$\int \operatorname{Sen} x\,dx$	$-\operatorname{Cos} x + C$
$\int \operatorname{Cos} x\,dx$	$\operatorname{Sen} x + C$
$\int \operatorname{Tg} x\,dx$	$-\operatorname{Ln}[\operatorname{Cos} x] + C$
$\int dx / (1 + x^2)$	$\operatorname{Arc\,Tg} x + C$
$\int dx / (1 - x^2)$	$\operatorname{Arg\,Th} x + C$
$\int dx / \sqrt{(1 + x^2)}$	$\operatorname{Arg\,Sh} x + C$
$\int dx / \sqrt{(1 - x^2)}$	$\operatorname{Arc\,Sen} x + C$
$\int dx / \sqrt{(x^2 - 1)}$	$\operatorname{Arg\,Ch} x + C$
$\int dx / \sqrt{(x^2 + a^2)}$	$\frac{1}{a}\operatorname{Arg\,Sh}\left(\frac{x}{a}\right) + C$
$\int dx / \sqrt{(x^2 - a^2)}$	$\frac{1}{a}\operatorname{Arg\,Ch}\left(\frac{x}{a}\right) + C$
$\int dx / \sqrt{(a^2 - x^2)}$	$\operatorname{Arc\,Sen}\left(\frac{x}{a}\right) + C$
$\int dx / \sqrt{(x^2 + a)}$	$\operatorname{Ln}\left[x + \sqrt{(x^2 + a)}\right] + C$
$\int dx / (a^2 - x^2)$	$\lvert x\rvert < a \rightarrow \frac{1}{a}\operatorname{Arg\,Th}\left(\frac{x}{a}\right) + C$ $x = \pm a \rightarrow \frac{1}{2a}\operatorname{Ln}\left[\frac{a+x}{a-x}\right] + C$
$\int dx / (x^2 - a^2)$	$\frac{1}{2a}\operatorname{Ln}\left[\frac{x-a}{x+a}\right] + C$
$\int dx / (x^2 + a^2)$	$\frac{1}{a}\operatorname{Arc\,Tg}\left(\frac{x}{a}\right) + C$

Derivadas

$c \cdot f(x)$	$c \cdot f\,`(x)$
$[f(x)]^n$	$n \cdot [f(x)]^{n-1} \cdot f\,`(x)$
$\operatorname{Ln} f(x)$	$\frac{f'(x)}{f(x)}$
$\operatorname{Log}_a f(x)$	$\frac{f'(x)}{f(x)} \bullet \frac{1}{Log\ a}$
$e^{f(x)}$	$e^{f(x)} \cdot f\,`(x)$
$a^{f(x)}$	$a^{f(x)} \cdot \operatorname{Ln} a \cdot f\,`(x)$
$\operatorname{Sen} f(x)$	$\operatorname{Cos} f(x) \cdot f\,´(x)$
$\operatorname{Cos} f(x)$	$-\operatorname{Sen} f(x) \cdot f\,´(x)$
$\operatorname{Tg} f(x)$	$f\,`(x) / \operatorname{Cos}^2 f(x)$
$\operatorname{Cotg} f(x)$	$-1 \cdot f\,`(x) / \operatorname{Sen}^2 f(x)$
$\operatorname{Sec} f(x)$	$\operatorname{Sec} f(x) \cdot \operatorname{Tg} f(x) \cdot f\,`(x)$
$\operatorname{Cosec} f(x)$	$-\operatorname{Cosec} f(x) \cdot \operatorname{Cotg} f(x) \cdot f\,`(x)$
$\operatorname{Arc\,Sen} f(x)$	$f\,`(x) / \sqrt{(1 - [f(x)]^2)}$
$\operatorname{Arc\,Cos} f(x)$	$-1 \cdot f\,`(x) / \sqrt{(1 - [f(x)]^2)}$
$\operatorname{Arc\,Tg} f(x)$	$f\,`(x) / (1 + [f(x)]^2)$
$\operatorname{Sh} f(x)$	$f\,`(x) \cdot \operatorname{Ch} f(x)$
$\operatorname{Ch} f(x)$	$f\,`(x) \cdot \operatorname{Sh} f(x)$
$\operatorname{Th} f(x)$	$f\,`(x) / \operatorname{Ch}^2 f(x)$
$\operatorname{Arg\,Sh} f(x)$	$f\,`(x) / \sqrt{(1 + [f(x)]^2)}$
$\operatorname{Arg\,Ch} f(x)$	$f\,`(x) / \sqrt{([f(x)]^2 - 1)}$

Propiedades de los Logaritmos

$Log\,(a \cdot b) = Log\,a + Log\,b$	$L\,0 = \infty$
$Log\,(x/y) = Log\,x - Log\,y$	$L\,1 = 0$
$Log\,x^y = y \cdot Log\,x$	$e^{\pm\infty} = 0$
$Log_x y = Log\,y / Log\,x$	$e^0 = 1$
$Log_a b = c \rightarrow a^c = b$	$e^{L5} = 5$

Indeterminaciones

0/0	∞/∞	$0 \cdot \infty$	$\infty - \infty$	1^∞	∞^0	0^0

Relaciones Trigonométricas

$Sen\,(a+b) = Sen\,a \cdot Cos\,b + Sen\,b \cdot Cos\,a$
$Sen\,(a-b) = Sen\,a \cdot Cos\,b - Sen\,b \cdot Cos\,a$

$Cos\,(a+b) = Cos\,a \cdot Cos\,b - Sen\,a \cdot Sen\,b$
$Cos\,(a-b) = Cos\,a \cdot Cos\,b + Sen\,a \cdot Sen\,b$

$Tan\,(a+b) = (tan\,a + tan\,b) / (1 - tan\,a \cdot tan\,b)$
$Tan\,(a-b) = (tan\,a - tan\,b) / (1 + tan\,a \cdot tan\,b)$

$Cos\ 2{\cdot}a = Cos^2 a - Sen^2 a$ $Sen\ 2{\cdot}a = 2 \cdot Sen\,a \cdot Cos\,a$	$Cos2\,a = (1 + Cos\ 2{\cdot}a) / 2$ $Sen2\,a = (1 - Cos\ 2{\cdot}a) / 2$

$Cos\,a = Cos^2\,a/2 - Sen^2\,a/2$
$Sen\,a = 2 \cdot Sen\,a/2 \cdot Cos\,a/2$

$Sh^2\,a = (Ch\ 2{\cdot}a - 1) / 2$ $Ch^2\,a = (1 + Ch\ 2{\cdot}a) / 2$ $Ch^2\,a - Sh^2\,a = 1$	$Ch\ 2{\cdot}a = Ch^2\,a + Sh^2\,a$ $Sh\ 2{\cdot}a = 2 \cdot Sh\,a \cdot Ch\,a$ $Cos^2\,a + Sen^2\,a = 1$

$Ch\,(a+b) = Ch\,a \cdot Ch\,b + Sh\,a \cdot Sh\,b$
$Sh\,(a+b) = Sh\,a \cdot Ch\,b + Ch\,a \cdot Sh\,b$

$Sen\ 3x = 3\,Sen\,x - 4\,Sen^3\,x$ $Cos\ 3x = 4\,Cos^3\,x - 3\,Cos\,x$	$tg = sen/cos$ $cotg = cos/sen$	$sec = 1/Cos$ $Cosec = 1/sen$

$Ch\,x = e^x + e^{-x} / 2$ $Sh\,x = e^x - e^{-x} / 2$	$Arg\,Ch\,x = Ln\,(x + \sqrt{(x^2 - 1)})$ $Arg\,Sh\,x = Ln\,(x + \sqrt{(x^2 + 1)})$

$Sen\,ax \cdot Cos\,bx = 1/2\,[Sen\,(a+b)x + Sen\,(a-b)x]$
$Sen\,ax \cdot Sen\,bx = 1/2\,[Cos\,(a-b)x - Cos\,(a+b)x]$

$Cos\,ax \cdot Cos\,bx = 1/2\,[Cos\,(a+b)x + Cos\,(a-b)x]$

2^o Cuadrante $\pi - \varphi$	1^{er} Cuadrante φ
3^{er} Cuadrante $\varphi - \pi$	4^o Cuadrante $2\pi - \varphi$

Grados	Radianes	Seno	Coseno	Tangente
0	0	0	1	0
30	$\Pi/6$	$1/2$	$\sqrt{3}/2$	$1/\sqrt{3}$
45	$\Pi/4$	$\sqrt{2}/2$	$\sqrt{2}/2$	1
60	$\Pi/3$	$\sqrt{3}/2$	$1/2$	$\sqrt{3}$
90	$\Pi/2$	1	0	Inf.

$(a+b)^3 = a^3 + 3\,a^2b + 3\,ab^2 + b^3$
$(a-b)^3 = a^3 - 3\,a^2b + 3\,ab^2 - b^3$

Transformaciones con Variables

$Tg\ a/2 = t$ $Sen\ a = 2{\cdot}t / [1+t^2]$	$\sqrt{(a^2 - x^2)} = (x = a\,Sen\,t) = a\,Cos\,t$
$Cos\ a = [1-t2] / [1+t2]$ $da = 2 \cdot dt / [1+t2]$	$\sqrt{(x^2 - a^2)} = (x = a\,Sec\,t) = a\,Tg\,t$ $\sqrt{(x^2 + a^2)} = (x = a\,Tg\,t) = a\,Sec\,t$

$Sen\,(-a) = -Sen\,a$	$Cos\,(-a) = Cos\,a$	$Tg\,(-a) = -Tg\,a$
$Sen\,(\Pi + a) = -Sen\,a$	$Cos\,(\Pi + a) = -Cos\,a$	$Tg\,(\Pi + a) = Tg\,a$
$Sen\,(\Pi - a) = Sen\,a$	$Cos\,(\Pi - a) = -Cos\,a$	$Tg\,(\Pi - a) = -Tg\,a$
$Sen(\Pi/2 + a) = Cos\,a$	$Cos(\Pi/2 + a) = -Sen\,a$	$Tg(\Pi/2 + a) = -1/Tg\,a$
$Sen(\Pi/2 - a) = Cos\,a$	$Cos(\Pi/2 - a) = Sen\,a$	$Tg(\Pi/2 - a) = 1/Tg\,a$

Binomio de Newton

$$(a+b)^n = a^n + \frac{n}{1!}a^{n-1}b + \frac{n(n-1)}{2!}a^{n-2}b^2 + \frac{n(n-1)(n-2)}{3!}a^{n-3}b^3 \ldots$$