

LISTA DE DERIVADAS Y SUBSTITUCIONES

Expresión	Derivada
$y =$	$y' =$
$y =$	$y' =$
$y = \operatorname{sen} f(x)$	$y' = \cos f(x) \cdot f'(x)$
$y = \cos f(x)$	$y' = -\operatorname{sen} f(x) \cdot f'(x)$
$y = \operatorname{tg} f(x)$	$y' =$
$y = \operatorname{sen} n f(x)$	$y' = n \cdot \cos n f(x) \cdot f'(x)$
$y = \cos n f(x)$	$y' = -n \cdot \operatorname{sen} n f(x) \cdot f'(x)$
$y = \operatorname{tg} n f(x)$	$y' = n \cdot (1 + \operatorname{tg}^2 n f(x)) \cdot f'(x)$
$y = \operatorname{arcsen} n f(x)$	$y' =$
$y = \operatorname{arccos} n f(x)$	$y' =$
$y = \operatorname{arctg} n f(x)$	$y' =$
$y = e f(x)$	$y' = f'(x) \cdot e f(x)$
$y = \ln f(x)$	$y' =$
$y = n f(x)$	$y' = n f'(x) \cdot \ln n$
$y = (f(x))^n$	$y' = n \cdot (f(x))^{n-1} \cdot f'(x)$

INFINITOSIMOS

Expresión	Infinitésimo	$\hat{x}$
$\operatorname{arcsen} f(x)$	$f(x)$	0
$\operatorname{sen} n f(x)$	$f(x) \cdot n$	0
	1	0
	0	$\hat{a}$
$\cos x$	1	0
$1 - \cos x$	$x^2/2$	0
$\cos(\operatorname{sen} f(x))$	$f(x)$	0
$\operatorname{tg} f(x)$	$f(x)$	0
$\operatorname{arctg} f(x)$	$f(x)$	0
$\ln(1 + f(x))$	$f(x)$	0
$\ln f(x)$	$f(x) - 1$	0
$e f(x) - 1$	$f(x)$	0
$n x - 1$	$x \cdot \ln a$	0

SUBSTITUCIONES TRIGONOMETRICAS

Expresión	Equivalente
$1 - \cos x$	$2 \cdot \operatorname{sen}^2(x/2)$
$\operatorname{sen} 2x$	$2 \cdot \operatorname{sen} x \cdot \cos x$
$\cos 2x - 1$	$-2 \cdot \operatorname{sen}^2 x$

PRIMITIVAS

Expresión	Primitiva
	$\ln f(x) + C$
	$ef(x) + C$
	$\operatorname{sen} f(x) + C$
	$-\cos f(x) + C$
	$\operatorname{tg} x + C$
	$\operatorname{arcsen} f(x) + C$
	$\operatorname{arccos} f(x) + C$
	$\operatorname{arctan} f(x) + C$
	$\operatorname{tg} x - x + C$