

TABLA DE DERIVADAS

Función simple	Derivada	Función compuesta	Derivada
$y = k$	$y' = 0$		
$y = x$	$y' = 1$		
$y = u(x) + v(x)$	$y' = u'(x) + v'(x)$		
$y = k \cdot u(x)$	$y' = k \cdot u'(x)$		
$y = u(x) \cdot v(x)$	$y' = u'(x) \cdot v(x) + u(x) \cdot v'(x)$		
$y = \frac{u(x)}{v(x)}$	$y' = \frac{u'(x) \cdot v(x) - u(x) \cdot v'(x)}{v^2(x)}$		
$y = x^n$	$y' = n \cdot x^{n-1}$	$y = u^n(x)$	$y' = n \cdot u^{n-1}(x) \cdot u'(x)$
$y = \ln x$	$y' = \frac{1}{x}$	$y = \ln u(x)$	$y' = \frac{u'(x)}{u(x)}$
$y = \log_a x$	$y' = \frac{1}{x} \cdot \log_a e$	$y = \log_a u(x)$	$y' = \frac{1}{u(x)} \cdot \log_a e \cdot u'(x)$
$y = e^x$	$y' = e^x$	$y = e^{u(x)}$	$y' = e^{u(x)} \cdot u'(x)$
$y = a^x$	$y' = a^x \cdot \ln a$	$y = a^{u(x)}$	$y' = a^{u(x)} \cdot \ln a \cdot u'(x)$
$y = \operatorname{sen} x$	$y' = \operatorname{cos} x$	$y = \operatorname{sen} u(x)$	$y' = \operatorname{cos} u(x) \cdot u'(x)$
$y = \operatorname{cos} x$	$y' = -\operatorname{sen} x$	$y = \operatorname{cos} u(x)$	$y' = -\operatorname{sen} u(x) \cdot u'(x)$
$y = \operatorname{tg} x$	$y' = \frac{1}{\operatorname{cos}^2 x} = 1 + \operatorname{tg}^2 x$	$y = \operatorname{tg} u(x)$	$y' = \frac{u'(x)}{\operatorname{cos}^2 u(x)}$
$y = \operatorname{cotg} x$	$y' = \frac{-1}{\operatorname{sen}^2 x} = -(1 + \operatorname{cotg}^2 x)$	$y = \operatorname{cotg} u(x)$	$y' = \frac{-u'(x)}{\operatorname{sen}^2 u(x)}$
$y = \operatorname{arc} \operatorname{sen} x$	$y' = \frac{1}{\sqrt{1-x^2}}$	$y = \operatorname{arc} \operatorname{sen} u(x)$	$y' = \frac{u'(x)}{\sqrt{1-u^2(x)}}$
$y = \operatorname{arc} \operatorname{cos} x$	$y' = \frac{-1}{\sqrt{1-x^2}}$	$y = \operatorname{arc} \operatorname{cos} u(x)$	$y' = \frac{-u'(x)}{\sqrt{1-u^2(x)}}$
$y = \operatorname{arc} \operatorname{tg} x$	$y' = \frac{1}{1+x^2}$	$y = \operatorname{arc} \operatorname{tg} u(x)$	$y' = \frac{u'(x)}{1+u^2(x)}$