

TABLA DE DERIVACIÓN

TABLA DE FUNCIONES ELEMENTALES	
Función	Función derivada
$y = \text{constante}$	$y' = 0$
$y = x$	$y' = 1$
$y = a \cdot x$	$y' = a$
$y = x^m$	$y' = m \cdot x^{m-1}$
$y = \log_a x$	$y' = \frac{1}{x} \cdot \log_a e$
$y = \ln x$	$y' = \frac{1}{x}$
$y = a^x$	$y' = a^x \cdot \ln a$
$y = e^x$	$y' = e^x$
$y = \text{sen } x$	$y' = \text{cos } x$
$y = \text{cos } x$	$y' = -\text{sen } x$
$y = \text{tg } x$	$y' = \text{sec}^2 x$
$y = \text{ctg } x$	$y' = -\text{cosec}^2 x$
$y = \text{sec } x$	$y' = \text{sec } x \cdot \text{tg } x$
$y = \text{cosec } x$	$y' = -\text{cosec } x \cdot \text{ctg } x$
$y = \arcsen x$	$y' = \frac{1}{\sqrt{1-x^2}}$
$y = \arccos x$	$y' = \frac{-1}{\sqrt{1-x^2}}$
$y = \text{arctg } x$	$y' = \frac{1}{1+x^2}$
$y = \text{arcctg } x$	$y' = \frac{-1}{1+x^2}$
$y = \text{arcsec } x$	$y' = \frac{1}{x \cdot \sqrt{x^2-1}}$
$y = \text{arccosec } x$	$y' = \frac{-1}{x \cdot \sqrt{x^2-1}}$

TABLA DE FUNCIONES COMPUESTAS	
Función	Función derivada
$y = a \cdot u$	$y' = a \cdot u'$
$y = u^m$	$y' = m \cdot u^{m-1} \cdot u'$
$y = \log_a u$	$y' = \frac{u'}{u} \cdot \log_a e$
$y = \ln u$	$y' = \frac{u'}{u}$
$y = a^u$	$y' = a^u \cdot u' \cdot \ln a$
$y = e^u$	$y' = e^u \cdot u'$
$y = u^v$	$y' = u^v \cdot v' \cdot \ln u + v \cdot u^{v-1} \cdot u'$
$y = \text{sen } u$	$y' = u' \cdot \text{cos } u$
$y = \text{cos } u$	$y' = -u' \cdot \text{sen } u$
$y = \text{tg } u$	$y' = u' \cdot \text{sec}^2 u$
$y = \text{ctg } u$	$y' = -u' \cdot \text{cosec}^2 u$
$y = \text{sec } u$	$y' = u' \cdot \text{sec } u \cdot \text{tg } u$
$y = \text{cosec } u$	$y' = -u' \cdot \text{cosec } u \cdot \text{ctg } u$
$y = \arcsen u$	$y' = \frac{u'}{\sqrt{1-u^2}}$
$y = \arccos u$	$y' = \frac{-u'}{\sqrt{1-u^2}}$
$y = \text{arctg } u$	$y' = \frac{u'}{1+u^2}$
$y = \text{arcctg } u$	$y' = \frac{-u'}{1+u^2}$
$y = \text{arcsec } u$	$y' = \frac{u'}{u \cdot \sqrt{u^2-1}}$
$y = \text{arccosec } u$	$y' = \frac{-u'}{u \cdot \sqrt{u^2-1}}$

Inmediatas para recordar siempre	
$y = \sqrt{x}$	$y' = \frac{1}{2\sqrt{x}}$
$y = \frac{1}{x}$	$y' = \frac{-1}{x^2}$

Reglas para recordar siempre	
$y = u \pm v$	$y' = u' \pm v'$
$y = u \cdot v$	$y' = u' \cdot v + u \cdot v'$
$y = \frac{u}{v}$	$y' = \frac{u' \cdot v - u \cdot v'}{v^2}$

Anotaciones
<p>"y, u, v" representan funciones de "x", por tanto son; $y=f(x)$, $u=u(x)$, $v=v(x)$ "a, m" representan números reales "ln" es el logaritmo neperiano (su base es el número "e"); $e \approx 2,71828$ En funciones exponenciales y logarítmicas "a" es un número positivo</p>