TABLA DE DERIVADAS (de usos más frecuentes)

Referencias: x *es la variable independiente,* c *es una constante,* u *y* v *son funciones de* x *derivables*

FUNCIONES	DERIVADAS	FUNCIONES	DERIVADAS
$y = c$	$y' = 0$	$y = u$	$y' = u'$
$y = x$	$y' = 1$	$y = u \pm v$	$y' = u' \pm v'$
$y = cx$	$y' = c$	$y = c.u$	$y' = c.u'$
$y = x^n, n \in \mathbb{R}$	$y' = n.x^{n-1}$	$y = u^n, n \in \mathbb{R}$	$y' = n.u^{n-1}.u'$
$y = \frac{1}{x}$	$y' = -\frac{1}{x^2}$	$y = \frac{1}{u}$	$y' = -\frac{1}{u^2}.u'$
$y = \sqrt{x}$	$y' = \frac{1}{2\sqrt{x}}$	$y = \sqrt{u}$	$y' = \frac{1}{2\sqrt{u}}.u'$
$y = \sqrt[n]{x}$	$y' = \frac{1}{n.\sqrt[n]{x^{n-1}}}$	$y = \sqrt[n]{u}$	$y' = \frac{1}{n.\sqrt[n]{u^{n-1}}}.u'$
$y = ln\, x$	$y' = \frac{1}{x}$	$y = ln\, u$	$y' = \frac{1}{u}.u'$
$y = log_a x$	$y' = \frac{1}{x}.log_a e$	$y = log_a u$	$y' = \frac{1}{u}.log_a e\,.u'$
$y = e^x$	$y' = e^x$	$y = e^u$	$y' = e^u.u'$
$y = a^x$	$y' = a^x\,.ln\, a$	$y = a^u$	$y' = a^u\,.ln\, a\,.u'$
$y = sen\, x$	$y' = cos\, x$	$y = sen\, u$	$y' = cos\, u\,.u'$
$y = cos\, x$	$y' = -sen\, x$	$y = cos\, u$	$y' = -sen\, u\,.u'$
$y = tan\, x$	$y' = \frac{1}{cos^2 x} = sec^2 x$	$y = tan\, u$	$y' = \frac{1}{cos^2 u}.u' = sec^2 u\ .u'$
$y = sec\, x$	$y' = sec\, x \cdot \text{tg}\, x = \frac{sen\, x}{cos^2 x}$	$y = sec\, u$	$y' = sec\, u \cdot \text{tg}\, u\,.u' = \frac{sen\, u}{\cos^2 u}.u'$
$y = cosec\, x$	$y' = -\,cosec\, x \cdot cotg\ x = -\frac{cos\, x}{sen^2 x}$	$y = cosec\, u$	$y' = -\,cosec\, u \cdot cotg\ u.u' = -\frac{cos\, u}{sen^2 u}\,.u'$
$y = cotg\, x$	$y' = \frac{-1}{sen^2 x} = -\,cosec^2 x$	$y = cotg\, u$	$y' = \frac{-1}{sen^2 u}.u' = -\,cosec^2 u\,.u'$
$y = arc\, sen\, x$	$y' = \frac{1}{\sqrt{1-x^2}}$	$y = arc\, sen\, u$	$y' = \frac{1}{\sqrt{1-u^2}}.u'$
$y = arc\, cos\, x$	$y' = -\frac{1}{\sqrt{1-x^2}}$	$y = arc\, cos\, u$	$y' = -\frac{1}{\sqrt{1-u^2}}.u'$
$y = arc\, tan\, x$	$y' = \frac{1}{1+x^2}$	$y = arc\, tan\, u$	$y' = \frac{1}{1+u^2}.u'$
$y = arc\, sec\, x$	$y' = \frac{1}{x.\sqrt{x^2-1}}$	$y = arc\, sec\, u$	$y' = \frac{1}{u.\sqrt{u^2-1}}.u'$
$y = arc\, cosec\, x$	$y' = -\frac{1}{x \cdot \sqrt{x^2-1}}$	$y = arc\, cosec\, u$	$y' = -\frac{1}{u \cdot \sqrt{u^2-1}}.u'$
$y = arc\, cotg\, x$	$y' = -\frac{1}{1+x^2}$	$y = arc\, cotg\, u$	$y' = -\frac{1}{1+u^2}.u'$
$y = u.v$	$y' = u'.v + u.v'$	$y = u^v$	$y' = u^v\left(v'.ln\, u + v \cdot \frac{u'}{u}\right)$
$y = \frac{u}{v}$	$y' = \frac{u'.v - u.v'}{v^2}$		