

Derivada de las funciones elementales:

función	derivada	función	derivada
k	0	k	0
x	1	u	u'
x^r	rx^{r-1}	u^r	$ru^{r-1}u'$
$\sqrt{x}$	$\frac{1}{2\sqrt{x}}$	$\sqrt{u}$	$\frac{u'}{2\sqrt{u}}$
$\sqrt[n]{x}$	$\frac{1}{n\sqrt[n]{x^{n-1}}}$	$\sqrt[n]{u}$	$\frac{u'}{n\sqrt[n]{u^{n-1}}}$
$\ln x$	$\frac{1}{x}$	$\ln u$	$\frac{u'}{u}$
$\lg_b x$	$\frac{1}{x \ln b} = \frac{1}{x} \lg_b e$	$\lg_b u$	$\frac{u'}{u \ln b} = \frac{u'}{u} \lg_b e$
e^x	e^x	e^u	$e^u u'$
a^x	$a^x \ln a$	a^u	$a^u u' \ln a$
x^x	$x^x (\ln x + 1)$	f^g	$f^g \left(g' \ln f + g \frac{f'}{f} \right)$
$\operatorname{sen} x$	$\cos x$	$\operatorname{sen} u$	$u' \cos u$
$\cos x$	$-\operatorname{sen} x$	$\cos u$	$-u' \operatorname{sen} u$
$\operatorname{tg} x$	$\frac{1}{\cos^2 x} = \sec^2 x$	$\operatorname{tg} u$	$\frac{u'}{\cos^2 u} = u' \sec^2 u$
$\sec x = \frac{1}{\cos x}$	$\sec x \operatorname{tg} x$	$\sec u = \frac{1}{\cos u}$	$u' \sec u \operatorname{tg} u$
$\csc x = \frac{1}{\operatorname{sen} x}$	$-\csc x \cot x$	$\csc u = \frac{1}{\operatorname{sen} u}$	$-u' \csc u \cot u$
$\cot x$	$\frac{-1}{\operatorname{sen}^2 x} = -\csc^2 x$	$\cot u$	$\frac{-u'}{\operatorname{sen}^2 u} = -u' \csc^2 u$
$\operatorname{arc} \operatorname{sen} x$	$\frac{1}{\sqrt{1-x^2}}$	$\operatorname{arc} \operatorname{sen} u$	$\frac{u'}{\sqrt{1-u^2}}$
$\operatorname{arc} \cos x$	$\frac{-1}{\sqrt{1-x^2}}$	$\operatorname{arc} \cos u$	$\frac{-u'}{\sqrt{1-u^2}}$
$\operatorname{arc} \operatorname{tg} x$	$\frac{1}{1+x^2}$	$\operatorname{arc} \operatorname{tg} u$	$\frac{u'}{1+u^2}$
$\operatorname{arc} \sec x$	$\frac{1}{ x \sqrt{x^2-1}}$	$\operatorname{arc} \sec u$	$\frac{u'}{ u \sqrt{u^2-1}}$
$\operatorname{arc} \csc x$	$\frac{-1}{ x \sqrt{x^2-1}}$	$\operatorname{arc} \csc u$	$\frac{-u'}{ u \sqrt{u^2-1}}$
$\operatorname{arc} \operatorname{cotg} x$	$\frac{-1}{1+x^2}$	$\operatorname{arc} \operatorname{cotg} u$	$\frac{-u'}{1+u^2}$
$\operatorname{senh} x$	$\cosh x$	$\operatorname{senh} u$	$u' \cosh u$
$\cosh x$	$\operatorname{senh} x$	$\cosh u$	$u' \operatorname{senh} u$
$\operatorname{tgh} x$	$\frac{1}{\cosh^2 x}$	$\operatorname{tgh} u$	$\frac{u'}{\cosh^2 u}$