

Regras de derivación.

- $(f(x) \pm g(x))' = f'(x) \pm g'(x)$
- $(k \cdot f(x))' = k f'(x)$
- $(f(x) \cdot g(x))' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$
- $(f(x)^{g(x)})' = g(x) \cdot (f(x))^{g(x)-1} \cdot f'(x) + (f(x))^{g(x)} \cdot \ln(f(x)) \cdot g'(x)$
- $\left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x) \cdot g(x) - f(x) \cdot g'(x)}{(g(x))^2}$
- $(g \circ f)'(x) = (g(f(x)))' = g'(f(x)) \cdot f'(x)$

Táboa de derivadas.

$f(x) = x^n$	$f'(x) = n \cdot x^{n-1}$	$f(x) = (g(x))^n$	$f'(x) = n(g(x))^{n-1} \cdot g'(x)$
$f(x) = k$	$f'(x) = 0$		
$f(x) = \sqrt{x}$	$f'(x) = \frac{1}{2\sqrt{x}}$	$f(x) = \sqrt{g(x)}$	$f'(x) = \frac{g'(x)}{2\sqrt{g(x)}}$
$f(x) = \sqrt[n]{x}$	$f'(x) = \frac{1}{n \sqrt[n]{x^{n-1}}}$	$f(x) = \sqrt[n]{g(x)}$	$f'(x) = \frac{g'(x)}{n \sqrt[n]{(g(x))^{n-1}}}$
$f(x) = a^x$	$f'(x) = a^x \cdot \ln(a)$	$f(x) = a^{g(x)}$	$f'(x) = a^{g(x)} \cdot \ln(a) \cdot g'(x)$
$f(x) = e^x$	$f'(x) = e^x$	$f(x) = e^{g(x)}$	$f'(x) = e^{g(x)} \cdot g'(x)$
$f(x) = \ln x$	$f'(x) = \frac{1}{x}$	$f(x) = \ln(g(x))$	$f'(x) = \frac{g'(x)}{g(x)}$
$f(x) = \log_a x$	$f'(x) = \frac{1}{x} \cdot \frac{1}{\ln a}$	$f(x) = \log_a(g(x))$	$f'(x) = \frac{g'(x)}{g(x) \ln a}$
$f(x) = \operatorname{sen} x$	$f'(x) = \cos x$	$f(x) = \operatorname{sen}(g(x))$	$f'(x) = \cos(g(x)) \cdot g'(x)$
$f(x) = \cos x$	$f'(x) = -\operatorname{sen} x$	$f(x) = \cos(g(x))$	$f'(x) = -\operatorname{sen}(g(x)) \cdot g'(x)$
$f(x) = \operatorname{tg} x$	$f'(x) = \frac{1}{\cos^2 x} = \sec^2 x$	$f(x) = \operatorname{tg}(g(x))$	$f'(x) = \frac{g'(x)}{\cos^2(g(x))} = (1 + \operatorname{tg}^2(g(x))) g'(x)$
$f(x) = \operatorname{ctg} x$	$f'(x) = -\frac{1}{\operatorname{sen}^2 x} = -\operatorname{cosec}^2 x$	$f(x) = \operatorname{ctg}(g(x))$	$f'(x) = -\frac{g'(x)}{\operatorname{sen}^2(g(x))} = -(1 + \operatorname{cotg}^2(g(x))) \cdot g'(x)$
$f(x) = \operatorname{arcsen} x$	$f'(x) = \frac{1}{\sqrt{1-x^2}}$	$f(x) = \operatorname{arcsen}(g(x))$	$f'(x) = \frac{g'(x)}{\sqrt{1-(g(x))^2}}$
$f(x) = \operatorname{arccos} x$	$f'(x) = -\frac{1}{\sqrt{1-x^2}}$	$f(x) = \operatorname{arccos}(g(x))$	$f'(x) = -\frac{g'(x)}{\sqrt{1-(g(x))^2}}$
$f(x) = \operatorname{arctg} x$	$f'(x) = \frac{1}{1+x^2}$	$f(x) = \operatorname{arctg}(g(x))$	$f'(x) = \frac{g'(x)}{1+(g(x))^2}$
$f(x) = \operatorname{arcctg}(x)$	$f'(x) = -\frac{1}{1+x^2}$	$f(x) = \operatorname{arcctg}(g(x))$	$f'(x) = -\frac{g'(x)}{1+(g(x))^2}$
$f(x) = \sec x$	$f'(x) = \sec x \cdot \operatorname{tg} x$	$f(x) = \sec(g(x))$	$f'(x) = \sec(g(x)) \operatorname{tg}(g(x)) g'(x)$
$f(x) = \operatorname{cosec} x$	$f'(x) = -\operatorname{cosec} x \cdot \operatorname{ctg} x$	$f(x) = \operatorname{cosec}(g(x))$	$f'(x) = -\operatorname{cosec}(g(x)) \operatorname{ctg}(g(x)) g'(x)$