

## Tabla de derivadas completa

Algebra de derivadas	
$f(x) = k \cdot g(x)$	$f'(x) = k \cdot g'(x)$
$f(x) = x^n$	$f'(x) = n \cdot x^{n-1}$
$f(x) = g(x) + h(x)$	$f'(x) = g'(x) + h'(x)$
$f(x) = g(x) - h(x)$	$f'(x) = g'(x) - h'(x)$
$f(x) = g(x) \cdot h(x)$	$f'(x) = g'(x) \cdot h(x) + g(x) \cdot h'(x)$
$f(x) = \frac{g(x)}{h(x)}$	$f'(x) = \frac{g'(x) \cdot h(x) - g(x) \cdot h'(x)}{(h'(x))^2}$
$f(x) = g(h(x))$	$f'(x) = h'(x) \cdot g'(h(x))$
Derivada de las funciones exponenciales y logarítmicas	
$f(x) = e^x$	$f'(x) = e^x$
$f(x) = a^x$	$f'(x) = a^x \cdot \ln(a)$
$f(x) = \ln  x $	$f'(x) = \frac{1}{x}$
$f(x) = \log_a(x)$	$f'(x) = \frac{1}{x \cdot \ln(a)}$

## Derivada de las funciones trigonométricas

$f(x) = \text{sen}(x)$	$f'(x) = \text{cos}(x)$
$f(x) = \text{cos}(x)$	$f'(x) = -\text{sen}(x)$
$f(x) = \text{tan}(x)$	$f'(x) = \text{sec}^2(x)$
$f(x) = \text{csc}(x)$	$f'(x) = -\text{csc}(x) \cdot \text{cot}(x)$
$f(x) = \text{sec}(x)$	$f'(x) = \text{sec}(x) \cdot \text{tan}(x)$
$f(x) = \text{cot}(x)$	$f'(x) = -\text{csc}^2(x)$

## Derivada de las funciones trigonométricas inversas

$f(x) = \text{arcsen}(x)$	$f'(x) = \frac{1}{\sqrt{1-x^2}}$
$f(x) = \text{arccos}(x)$	$f'(x) = -\frac{1}{\sqrt{1-x^2}}$
$f(x) = \text{arctan}(x)$	$f'(x) = \frac{1}{1+x^2}$
$f(x) = \text{arccsc}(x)$	$f'(x) = -\frac{1}{x \cdot \sqrt{x^2-1}}$
$f(x) = \text{arcsec}(x)$	$f'(x) = \frac{1}{x \cdot \sqrt{x^2-1}}$
$f(x) = \text{arccot}(x)$	$f'(x) = -\frac{1}{1+x^2}$

## Derivada de las funciones hiperbólicas

$f(x) = \operatorname{senh}(x)$	$f'(x) = \operatorname{cosh}(x)$
$f(x) = \operatorname{cosh}(x)$	$f'(x) = \operatorname{senh}(x)$
$f(x) = \operatorname{tanh}(x)$	$f'(x) = \operatorname{sech}^2(x)$
$f(x) = \operatorname{csch}(x)$	$f'(x) = -\operatorname{cosh}(x) \cdot \operatorname{coth}(x)$
$f(x) = \operatorname{sech}(x)$	$f'(x) = -\operatorname{sech}(x) \cdot \operatorname{tanh}(x)$
$f(x) = \operatorname{coth}(x)$	$f'(x) = -\operatorname{csch}^2(x)$

## Derivada de las funciones hiperbólicas inversas

$f(x) = \operatorname{arcsenh}(x)$	$f'(x) = \frac{1}{\sqrt{1+x^2}}$
$f(x) = \operatorname{arccosh}(x)$	$f'(x) = \frac{1}{\sqrt{x^2-1}}$
$f(x) = \operatorname{arctanh}(x)$	$f'(x) = \frac{1}{1-x^2}$
$f(x) = \operatorname{arccsch}(x)$	$f'(x) = -\frac{1}{ x  \cdot \sqrt{x^2+1}}$
$f(x) = \operatorname{arcsech}(x)$	$f'(x) = -\frac{1}{x \cdot \sqrt{1-x^2}}$
$f(x) = \operatorname{arccoth}(x)$	$f'(x) = \frac{1}{1-x^2}$