

TABLA DERIVADAS

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1	$\frac{d}{dx}(cu) = cu'$	$\frac{d}{dx}(u+v) = u' + v'$	$\frac{d}{dx}(uv) = u'v + uv'$
2	$\frac{d}{dx}(uvw) = u'vw + uv'w + uvw'$	$\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{vu' - uv'}{v^2}$	$\frac{d}{dx}(c) = 0$
3	$\frac{d}{dx}(u^n) = nu^{n-1}u'$	$\frac{d}{dx} u  = \frac{u}{ u }u'$	$\frac{d}{dx}\ln(u) = \frac{1}{u}u'$
4	$\frac{d}{dx}(e^u) = e^u u'$	$\frac{d}{dx}\text{sen}(u) = \text{cos}(u)u'$	$\frac{d}{dx}\text{sen}(ku) = \text{cos}(ku)ku'$
5	$\frac{d}{dx}\text{cos}(u) = -\text{sen}(u)u'$	$\frac{d}{dx}\text{cos}(ku) = -\text{sen}(ku)ku'$	$\frac{d}{dx}\text{tan}(u) = \text{sec}^2(u)u'$
6	$\frac{d}{dx}\text{sec}(u) = \text{sec}(u)\text{tan}(u)u'$	$\frac{d}{dx}\text{cot}(u) = -\text{csc}^2(u)u'$	$\frac{d}{dx}\text{csc}(u) = -\text{csc}(u)\text{cot}(u)u'$
7	$\frac{d}{dx}f(g(x)) = f'(g(x))g'(x)$	$\frac{d}{dx}\log_a(u) = \frac{1}{u\ln(a)}u'$	$\frac{d}{dx}a^u = a^u \ln(a)u'$
8	$\frac{d}{dx}\text{arc sen}(u) = \frac{1}{\sqrt{1-u^2}}u'$	$\frac{d}{dx}\text{arc cos}(u) = -\frac{1}{\sqrt{1-u^2}}u'$	$\frac{d}{dx}\text{arctan}(u) = \frac{1}{1+u^2}u'$
9	$\frac{d}{dx}\text{senh}(u) = \text{cosh}(u)u'$	$\frac{d}{dx}\text{cosh}(u) = \text{senh}(u)u'$	$\frac{d}{dx}\text{tanh}(u) = \text{sech}^2(u)u'$
10	$\frac{d}{dx}\text{sech}(u) = -\text{sech}(u)\text{tanh}(u)u'$	$\frac{d}{dx}\text{csch}(u) = -\text{csch}(u)\text{coth}(u)u'$	$\frac{d}{dx}\text{coth}(u) = -\text{csch}^2(u)u'$
11	$\frac{d}{dx}\text{senh}^{-1}(u) = \frac{1}{\sqrt{1+u^2}}u'$	$\frac{d}{dx}\text{cosh}^{-1}(u) = \frac{1}{\sqrt{u^2-1}}u'$	$\frac{d}{dx}\text{tanh}^{-1}(u) = \frac{1}{1-u^2}u'$
12	$\frac{d}{dx}\text{sech}^{-1}(u) = -\frac{1}{u\sqrt{1-u^2}}u'$	$\frac{d}{dx}\text{csch}^{-1}(u) = -\frac{1}{ u \sqrt{1+u^2}}u'$	$\frac{d}{dx}\text{coth}^{-1}(u) = \frac{1}{1-u^2}u'$

TRIGONOMETRÍA HIPERBÓLICA

1	$\text{cosh}(x) = \frac{e^x + e^{-x}}{2}$	$\text{senh}(x) = \frac{e^x - e^{-x}}{2}$	$\text{tanh}(x) = \frac{\text{senh}(x)}{\text{cosh}(x)}$
2	$\text{cosh}^2(x) - \text{senh}^2(x) = 1$	$1 - \text{tanh}^2(x) = \text{sech}^2(x)$	$\text{coth}^2(x) - 1 = \text{csch}^2(x)$
3	$\text{senh}^{-1}(x) = \ln(x + \sqrt{x^2 + 1})$	$\text{cosh}^{-1}(x) = \ln(x + \sqrt{x^2 - 1})$	$\text{tanh}^{-1}(x) = \frac{1}{2} \ln\left(\frac{1+x}{1-x}\right)$
4	$\text{senh}^2(x) = \frac{-1 + \text{cosh}(2x)}{2}$	$\text{cosh}^2(x) = \frac{1 + \text{cosh}(2x)}{2}$	$\text{cosh}(2x) = \text{cosh}^2(x) + \text{senh}^2(x)$

TRIGONOMETRÍA CIRCULAR

1	$\text{sen}^2(x) + \text{cos}^2(x) = 1$	$1 + \text{tan}^2(x) = \text{sec}^2(x)$	$1 + \text{cot}^2(x) = \text{csc}^2(x)$
2	$\text{sen}(x + \pi/2) = \text{cos}(x)$	$\text{sen}(\pi - x) = \text{sen}(x),$	$\text{sen}(\pi/2 - x) = \text{cos}(x)$
3	$\text{cos}(x + \pi/2) = -\text{sen}(x)$	$\text{sen}(2x) = 2\text{sen}(x)\text{cos}(x)$	$\text{cos}(2x) = \text{cos}^2(x) - \text{sen}^2(x)$
4	$\text{tan}(2x) = \frac{2\text{tan}(x)}{1 - \text{tan}^2(x)}$	$\text{sen}^2(x) = \frac{1 - \text{cos}(2x)}{2}$	$\text{cos}^2(x) = \frac{1 + \text{cos}(2x)}{2}$
5	$\text{sen}(-x) = -\text{sen}(x),$	$\text{cos}(-x) = \text{cos}(x)$	$\text{tan}(-x) = -\text{tan}(x)$
6	$\text{csc}(x) = 1/\text{sen}(x),$	$\text{sec}(x) = 1/\text{cos}(x)$	$\text{cot}(x) = 1/\text{tan}(x)$
7	$\text{tan}(x) = \frac{\text{sen}(x)}{\text{cos}(x)}$	$\text{cot}(x) = \frac{\text{cos}(x)}{\text{sen}(x)}$	
8	$a\text{sen}(x) + b\text{cos}(x) = R\text{sen}(x + \alpha) \implies$	$R = \sqrt{a^2 + b^2} \implies$	$\text{tan}(\alpha) = \frac{b}{a}$
9	$a\text{sen}(x) + b\text{cos}(x) = R\text{cos}(x - \alpha) \implies$	$R = \sqrt{a^2 + b^2} \implies$	$\text{tan}(\alpha) = \frac{a}{b}$
10	$\text{sen}^{-1}(x) + \text{cos}^{-1}(x) = \pi/2$	$\text{tan}^{-1}(x) + \text{cot}^{-1}(x) = \pi/2$	$\text{tan}^{-1}(x) + \text{tan}^{-1}(1/x) = \pi/2$