

REGLAS DE DERIVACIÓN

Donde $u(x)$ y $v(x)$ son funciones reales de variable real, $n \in \mathbb{N}$ y $a \in \mathbb{R}$ son números

Polinomios	$a' = 0$	
	$x' = 1$	
	$(ax)' = a$	
	$(x^n)' = nx^{n-1}$	
Suma	$(u + v)' = u' + v'$	
Resta	$(u - v)' = u' - v'$	
Producto	$(u \cdot v)' = u' \cdot v + u \cdot v'$	
Cociente	$\left(\frac{u}{v}\right)' = \frac{u' \cdot v - u \cdot v'}{v^2}$	$\left(\frac{1}{x}\right)' = -\frac{1}{x^2}$
	$\left(\frac{1}{u}\right)' = -\frac{u'}{u^2}$	
Potencia	$(u^n)' = n \cdot u^{n-1} \cdot u'$	
Raíces	$(\sqrt{u})' = \frac{u'}{2\sqrt{u}}$	$(\sqrt{x})' = \frac{1}{2\sqrt{x}}$
Logaritmos	$(\ln u)' = \frac{u'}{u}$	$(\log_a u)' = \frac{u'}{u} \cdot \log_a(e)$
Exponenciales	$(e^u)' = e^u \cdot u'$	$(a^u)' = a^u \cdot u' \cdot \ln a$
Potencias con exponenciales	$(u^v)' = v \cdot u^{v-1} \cdot u' + u^v \cdot v' \cdot \ln u$	
Trigonómicas	$(\operatorname{sen} u)' = u' \cdot \cos u$	$(\operatorname{arc} \operatorname{sen} u)' = \frac{u'}{\sqrt{1-u^2}}$
	$(\cos u)' = -u' \cdot \operatorname{sen} u$	$(\operatorname{arc} \cos u)' = \frac{-u'}{\sqrt{1-u^2}}$
	$(\operatorname{tg} u)' = \frac{u'}{\cos^2 u} = u' \cdot (1 + \operatorname{tg}^2 u)$	$(\operatorname{arc} \operatorname{tg} u)' = \frac{u'}{1+u^2}$