

REGLAS GENERALES DE DERIVACIÓN

	FUNCIÓN	DERIVADA
Suma y resta	$Y = u(x) \pm v(x)$	$Y' = u'(x) \pm v'(x)$
Multip. por escalar	$Y = k \cdot u(x)$	$Y' = k \cdot u'(x)$
PRODUCTO	$Y = u(x) \cdot v(x)$	$Y' = u'(x) \cdot v(x) + u(x) \cdot v'(x)$
COCIENTE	$Y = \frac{u(x)}{v(x)}$	$Y' = \frac{u'(x) \cdot v(x) - u(x) \cdot v'(x)}{(v(x))^2}$
REGLA DE CADENA	$Y = u(v(x))$	$Y' = u'(v(x)) \cdot v'(x)$

FUNCIONES ELEMENTALES

	FUNCIÓN	DERIVADA		FUNCIÓN COMPUESTA	DERIVADA
Polinómicas	$y = k$ (constante)	$y' = 0$			
	$y = x$	$y' = 1$			
	$y = x^n$	$y' = n \cdot x^{n-1}$		$y = u^n(x)$	$y' = n \cdot u^{n-1}(x) \cdot u'(x)$
radical	$y = \sqrt[n]{x}$	$y = \frac{1}{n \cdot \sqrt[n]{x^{n-1}}}$		$y = \sqrt[n]{u(x)}$	$y = \frac{u'(x)}{n \cdot \sqrt[n]{u^{n-1}(x)}}$
Exponenciales y logarítmicas	$y = \text{Ln}(x)$	$y' = \frac{1}{x}$		$y = \text{Ln}(u(x))$	$y' = \frac{u'(x)}{u(x)}$
	$y = \log_a(x)$	$y' = \frac{1}{x} \cdot \log_a e$		$y = \log_a(u(x))$	$y' = \frac{1}{u(x)} \cdot \log_a e \cdot u'(x)$
	$y = e^x$	$y' = e^x$		$y = e^{u(x)}$	$y' = e^{u(x)} \cdot u'(x)$
	$y = a^x$	$y' = a^x \cdot \text{Ln}(a)$		$y = a^{u(x)}$	$y' = a^{u(x)} \cdot \text{Ln}(a) \cdot u'(x)$
Funciones circulares	$y = \text{Sen}(x)$	$y' = \text{Cos}(x)$		$y = \text{Sen}(u(x))$	$y' = \text{Cos}(u(x)) \cdot u'(x)$
	$y = \text{Cos}(x)$	$y' = -\text{Sen}(x)$		$y = \text{Cos}(u(x))$	$y' = -\text{Sen}(u(x)) \cdot u'(x)$
	$y = \text{Tg}(x)$	$y' = \frac{1}{\text{Cos}^2 x} = 1 + \text{Tg}^2 x$		$y = \text{Tg}(u(x))$	$y' = \frac{u'(x)}{\text{Cos}^2 u(x)}$
	$y = \text{Arcsen}(x)$	$y' = \frac{1}{\sqrt{1-x^2}}$		$y = \text{Arcsen}(u(x))$	$y' = \frac{u'(x)}{\sqrt{1-u^2(x)}}$
	$y = \text{Arccos}(x)$	$y' = \frac{-1}{\sqrt{1-x^2}}$		$y = \text{Arccos}(u(x))$	$y' = \frac{-u'(x)}{\sqrt{1-u^2(x)}}$
	$y = \text{Arctg}(x)$	$y' = \frac{1}{1+x^2}$		$y = \text{Arctg}(x)$	$y' = \frac{u'(x)}{1+u(x)^2}$