

TABLA DE DERIVADAS

$y = k \longrightarrow y' = 0$	
$f(x) = kx \longrightarrow f'(x) = k$	
$f(x) = x^n \longrightarrow f'(x) = n x^{n-1} \longrightarrow f(x) = u^n \longrightarrow f'(x) = n u^{n-1} \cdot u'$	
$f(x) = \sqrt[n]{x} \longrightarrow f'(x) = \frac{1}{n \sqrt[n]{x^{n-1}}} \longrightarrow f(x) = \sqrt[n]{u} \longrightarrow f'(x) = \frac{1}{n \sqrt[n]{u^{n-1}}} \cdot u'$	
$f(x) = e^x \longrightarrow f'(x) = e^x \longrightarrow f(x) = e^u \longrightarrow f'(x) = e^u \cdot u'$	
$f(x) = a^x \longrightarrow f'(x) = a^x \ln a \longrightarrow f(x) = a^u \longrightarrow f'(x) = a^u \ln a \cdot u'$	
$f(x) = \ln x \longrightarrow f'(x) = \frac{1}{x} \longrightarrow f(x) = \ln u \longrightarrow f'(x) = \frac{1}{u} \cdot u'$	
$f(x) = \log_a x \longrightarrow f'(x) = \frac{1}{x} \cdot \frac{1}{\ln a} \longrightarrow f(x) = \log_a u \longrightarrow f'(x) = \frac{1}{u} \cdot \frac{1}{\ln a} \cdot u'$	
$f(x) = \operatorname{sen} x \longrightarrow f'(x) = \cos x \longrightarrow f(x) = \operatorname{sen} u \longrightarrow f'(x) = \cos u \cdot u'$	
$f(x) = \cos x \longrightarrow f'(x) = -\operatorname{sen} x \longrightarrow f(x) = \cos u \longrightarrow f'(x) = -\operatorname{sen} u \cdot u'$	
$f(x) = \operatorname{tg} x \longrightarrow f'(x) = \frac{1}{\cos^2 x} = 1 + \operatorname{tg}^2 x \longrightarrow f(x) = \operatorname{tg} u \longrightarrow f'(x) = \frac{1}{\cos^2 u} \cdot u' = (1 + \operatorname{tg}^2 u) \cdot u'$	
$f(x) = \operatorname{arc} \operatorname{sen} x \longrightarrow f'(x) = \frac{1}{\sqrt{1-x^2}} \longrightarrow f(x) = \operatorname{arc} \operatorname{sen} u \longrightarrow f'(x) = \frac{1}{\sqrt{1-u^2}} \cdot u'$	
$f(x) = \operatorname{arc} \cos x \longrightarrow f'(x) = \frac{-1}{\sqrt{1-x^2}} \longrightarrow f(x) = \operatorname{arc} \cos u \longrightarrow f'(x) = \frac{-1}{\sqrt{1-u^2}} \cdot u'$	
$f(x) = \operatorname{arc} \operatorname{tg} x \longrightarrow f'(x) = \frac{1}{1+x^2} \longrightarrow f(x) = \operatorname{arc} \operatorname{tg} u \longrightarrow f'(x) = \frac{1}{1+u^2} \cdot u'$	

• $y = f(x) + g(x) \longrightarrow y' = f'(x) + g'(x)$

• $y = f(x) \cdot g(x) \longrightarrow y' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$

• $y = \frac{f(x)}{g(x)} \longrightarrow y' = \frac{f'(x) \cdot g(x) - f(x) \cdot g'(x)}{[g(x)]^2}$

• $y = [f(x)]^{g(x)} \longrightarrow \text{SACAR LOGARITMOS NEPERIANOS}$