

## Tabla de derivadas de funciones compuestas.

Supongamos que  $u = f(x)$ .

Función	Derivada
$y = k \cdot u$	$y' = k \cdot u'$
$y = u^n$	$y' = nu^{n-1} \cdot u'$
$y = \sqrt{u}$	$y' = \frac{1}{2\sqrt{u}} \cdot u'$
$y = \ln u$	$y' = \frac{1}{u} \cdot u'$
$y = \frac{1}{u}$	$y' = \frac{-1}{u^2} \cdot u'$
$y = e^u$	$y' = e^u \cdot u'$
$y = a^u$	$y' = a^u \cdot (\ln a) \cdot u'$
$y = \text{sen}(u)$	$y' = (\text{cos } u) \cdot u'$
$y = \text{cos}(u)$	$y' = -(\text{sen } u) \cdot u'$
$y = \text{tag}(u)$	$y' = (1 + \text{tag}^2 u) \cdot u' =$ $\frac{1}{\text{cos}^2 u} \cdot u'$
$y = \text{arcsen}(u)$	$y' = \frac{1}{\sqrt{1-u^2}} \cdot u'$
$y = \text{arccos}(u)$	$y' = \frac{-1}{\sqrt{1-u^2}} \cdot u'$
$y = \text{arctag}(u)$	$y' = \frac{1}{1+u^2} \cdot u'$
$y = \log_a u$	$y' = \frac{1}{u} \cdot \frac{1}{\ln a} \cdot u'$

## Reglas de derivación.

$y = f \pm g$	$y' = f' \pm g'$
$y = f \cdot g$	$y' = f' \cdot g + f \cdot g'$
$y = \frac{f}{g}$	$y' = \frac{f' \cdot g - f \cdot g'}{g^2}$
Regla de la cadena $y = g(f(x))$	$y' = g'(f(x)) \cdot f'(x)$