Tabla de derivadas y ejemplos

$y=k$	$y'=0$	$y=8$	$y'=0$
$y=x$	$y'=1$	$y=x$	$y'=1$
Regla de la cadena $y=f(g(x)) \Rightarrow y'=f'(g(x))\cdot g'(x)$			
Funciones potenciales			
$y=f(x)^n$	$y'=n\cdot f(x)^{n-1}$	$y=(x^3+1)^4$	$y'=4(x^3+1)^3\cdot 3x^2$
$y=\sqrt{f(x)}$	$y'=\dfrac{f'(x)}{2\sqrt{f(x)}}$	$y=\sqrt{x}$	$y'=\dfrac{1}{2\sqrt{x}}$
$y=\sqrt[n]{f(x)}$	$y'=\dfrac{f'(x)}{n\sqrt[n]{f(x)^{n-1}}}$	$y=\sqrt[5]{x^3}$	$y'=\dfrac{3x^2}{5\sqrt[5]{(x^3)^4}}$
Funciones exponenciales			
$y=e^{f(x)}$	$y'=f'(x)\cdot e^{f(x)}$	$y=e^{-2x}$	$y'=e^{-2x}(-2)$
$y=e^x$	$y=e^x$		
$y=a^{f(x)}$	$y'=f'(x)\cdot a^{f(x)}\cdot \ln a$	$y=3^{x^3}$	$y=3^{x^3}\cdot 3x^2$
$y=a^x$	$y=a^x\cdot \ln a$	$y=2^x$	$y=2^x\cdot \ln 2$
Funciones logarítmicas			
$y=\ln f(x)$	$y'=\dfrac{f'(x)}{f(x)}$	$y=\ln(3x^2)$	$y'=\dfrac{6x}{3x^2}=\dfrac{2}{x}$
$y=\ln x$	$y'=\dfrac{1}{x}$		

$y = \lg_a f(x)$	$y' = \frac{f'(x)}{f(x)} \lg_a e$	$y = \lg_3 6x$	$y' = \frac{6}{6x} \ln_3 e$
Funciones trigonométricas			
$y = senf(x)$	$y' = f'(x) \cdot \cos f(x)$	$y = sen(-x)$	$y' = (-1) \cdot \cos(-x)$
$y = sen(x)$	$y' = \cos(x)$		
$y = \cos f(x)$	$y' = -f'(x) \cdot senf(x)$	$y = \cos(-x+2)$	$y' = -(-1) \cdot sen(-x+2)$
$y = \cos(x)$	$y' = -sen(x)$		
$y = tagf(x)$	$y' = \frac{f'(x)}{\cos^2 f(x)}$	$y = tag(7x)$	$y' = \frac{7}{\cos^2(7x)}$
$y = tag(x)$	$y' = \frac{1}{\cos^2 x}$		
$y = \cot agf(x)$	$y' = \frac{-f'(x)}{sen^2 f(x)}$	$y = \cot ag(7x+1)$	$y' = \frac{-7}{sen^2(7x+1)}$
$y = \sec f(x)$	$y' = \frac{senf(x) \cdot f'(x)}{\cos^2 f(x)}$	$y = \sec(7x+1)$	$y' = 7 \cdot \sec^2(7x+1) sen(7x+1)$
$y = \cos ecf(x)$	$y' = \frac{-\cos f(x) \cdot f'(x)}{sen^2 f(x)}$	$y = \cos ec(7x+1)$	$y' = -7 \cdot \cos ec^2(7x+1) \cos(7x+1)$
$y = arcsenf(x)$	$y' = \frac{f'(x)}{\sqrt{1-f(x)^2}}$	$y = arcsen(2x)$	$y' = \frac{2}{\sqrt{1-4x^2}}$
$y = \arccos f(x)$	$y' = -\frac{f'(x)}{\sqrt{1-f(x)^2}}$	$y = \arccos(2x)$	$y' = \frac{-2}{\sqrt{1-4x^2}}$

$y = arctagf(x)$	$y' = \frac{f'(x)}{1+f(x)^2}$	$y = arctg(x+1)$	$y' = \frac{1}{1+(x+1)^2}$
$y = arc\cot agf(x)$	$y' = -\frac{f'(x)}{1+f(x)^2}$	$y = arc\cot g(x+1)$	$y' = \frac{-1}{1+(x+1)^2}$

Derivadas de sumas, restas, productos y cocientes de funciones

$y = k \cdot f(x)$	$y = k \cdot f'(x)$	$y = 4 \cdot senx$	$y' = 4 \cdot (-\cos x)$
$y = f(x) + g(x)$	$y' = f'(x) + g'(x)$	$y = \ln x + senx$	$y' = \frac{1}{x} - \cos x$
$y = f(x) \cdot g(x)$	$y' = f'(x) \cdot g(x) + f(x) \cdot g'(x)$	$y = x \cdot e^x$	$y' = 1 \cdot e^x + x \cdot e^x$
$y = \frac{f(x)}{g(x)}$	$y' = \frac{f'(x) \cdot g(x) - f(x) \cdot g'(x)}{g(x)^2}$	$y = \frac{x}{senx}$	$y' = \frac{1 \cdot senx - x \cdot \cos x}{(senx)^2}$