

TABLA DE DERIVADAS

Función	Derivada
$y = k$	$y' = 0$
$y = x$	$y' = 1$
$y = k \cdot f$	$y' = k \cdot f'$
$y = \frac{f}{k}$	$y' = \frac{f'}{k}$
$y = f^n$	$y' = n \cdot f^{n-1} \cdot f'$
$y = \sqrt{f}$	$y' = \frac{f'}{2\sqrt{f}}$
$y = \sqrt[n]{f}$	$y' = \frac{f'}{n \cdot \sqrt[n]{f^{n-1}}}$
$y = a^f$	$y' = f' \cdot a^f \cdot \ln a$
$y = e^f$	$y' = f' \cdot e^f$
$y = f^g$	$y' = f^g \cdot g' \cdot \ln f + g \cdot f^{g-1} \cdot f'$
$y = \log_a f$	$y' = \frac{f'}{f \cdot \ln a}$
$y = \ln f$	$y' = f'/f$
$y = \operatorname{sen} f$	$y' = f' \cdot \operatorname{cos} f$
$y = \operatorname{cos} f$	$y' = -f' \cdot \operatorname{sen} f$
$y = \operatorname{sec} f$	$y' = f' \cdot \operatorname{sec} f \cdot \operatorname{tag} f$
$y = \operatorname{cosec} f$	$y' = -f' \cdot \operatorname{cosec} f \cdot \operatorname{cotag} f$
$y = \operatorname{cotag} f$	$y' = -f' (1 + \operatorname{cotag}^2 f)$
$y = \operatorname{arctag} f$	$y' = \frac{f'}{1 + f^2}$
$y = \operatorname{arcsen} f$	$y' = \frac{f'}{\sqrt{1 - f^2}}$
$y = \operatorname{arccos} f$	$y' = \frac{-f'}{\sqrt{1 - f^2}}$
$y = \operatorname{tag} f$	$y' = f' \cdot (1 + \operatorname{tag}^2 f) \quad (*)$

Operaciones con derivadas	
Operación	Derivada
$y = f + g$	$y' = f' + g'$
$y = f - g$	$y' = f' - g'$
$y = f \cdot g$	$y' = f' \cdot g + f \cdot g'$
$y = \frac{f}{g}$	$y' = \frac{f' \cdot g - f \cdot g'}{g^2}$

Trigonometría
$\operatorname{sen}(2A) = 2 \cdot \operatorname{sen} A \cdot \operatorname{cos} A$
$\operatorname{cos}(2A) = \operatorname{cos}^2 A - \operatorname{sen}^2 A$
$(*) \quad 1 + \operatorname{tag}^2 A = \operatorname{sec}^2 A = \frac{1}{\operatorname{cos}^2 A}$
$\operatorname{sen}^2 A + \operatorname{cos}^2 A = 1$

Logaritmos
$\log_a M \cdot N = \log_a M + \log_a N$
$\log_a \frac{M}{N} = \log_a M - \log_a N$
$\log_a M^n = n \cdot \log_a M$
$\log_a \sqrt[n]{M} = \frac{1}{n} \log_a M$