

Tabla de derivadas

Función simple y función compuesta, lado a lado

Derivadas inmediatas			
FUNCIÓN	DERIVADA	FUNCIÓN COMPUESTA	DERIVADA
$y = k$	$y' = 0$	—	—
$y = x$	$y' = 1$	—	—
$y = x^2$	$y' = 2x$	$y = f(x)^2$	$y' = 2f(x) \cdot f'(x)$
$y = x^n$	$y' = n \cdot x^{n-1}$	$y = f(x)^n$	$y' = n \cdot f(x)^{n-1} \cdot f'(x)$
$y = \frac{1}{x}$	$y' = -\frac{1}{x^2}$	$y = \frac{1}{f(x)}$	$y' = -\frac{f'(x)}{f(x)^2}$
$y = \frac{1}{x^n}$	$y' = \frac{-n}{x^{n+1}}$	$y = \frac{1}{f(x)^n}$	$y' = -\frac{n \cdot f'(x)}{f(x)^{n+1}}$
$y = \sqrt{x}$	$y' = \frac{1}{2\sqrt{x}}$	$y = \sqrt{f(x)}$	$y' = \frac{f'(x)}{2\sqrt{f(x)}}$
$y = \sqrt[n]{x}$	$y' = \frac{1}{n \cdot \sqrt[n]{x^{n-1}}}$	$y = \sqrt[n]{f(x)}$	$y' = \frac{f'(x)}{n \cdot \sqrt[n]{f(x)^{n-1}}}$
$y = a^x$	$y' = a^x \cdot \ln a$	$y = a^{f(x)}$	$y' = a^{f(x)} \cdot \ln a \cdot f'(x)$
$y = e^x$	$y' = e^x$	$y = e^{f(x)}$	$y' = e^{f(x)} \cdot f'(x)$
$y = \log_a x$	$y' = \frac{1}{x \cdot \ln a}$	$y = \log_a f(x)$	$y' = \frac{f'(x)}{f(x) \cdot \ln a}$
$y = \ln x$	$y' = \frac{1}{x}$	$y = \ln f(x)$	$y' = \frac{f'(x)}{f(x)}$
$y = \operatorname{sen} x$	$y' = \cos x$	$y = \operatorname{sen} f(x)$	$y' = f'(x) \cdot \cos f(x)$
$y = \cos x$	$y' = -\operatorname{sen} x$	$y = \cos f(x)$	$y' = -f'(x) \cdot \operatorname{sen} f(x)$
$y = \operatorname{tg} x$	$y' = 1 + \operatorname{tg}^2 x = \frac{1}{\cos^2 x}$	$y = \operatorname{tg} f(x)$	$y' = (1 + \operatorname{tg}^2 f(x)) \cdot f'(x) = \frac{f'(x)}{\cos^2 f(x)}$
$y = \operatorname{cotg} x$	$y' = -1 - \operatorname{cotg}^2 x = \frac{-1}{\operatorname{sen}^2 x}$	$y = \operatorname{cotg} f(x)$	$y' = (-1 - \operatorname{cotg}^2 f(x)) \cdot f'(x) = \frac{-f'(x)}{\operatorname{sen}^2 f(x)}$
$y = \operatorname{arc} \operatorname{sen} x$	$y' = \frac{1}{\sqrt{1-x^2}}$	$y = \operatorname{arc} \operatorname{sen} f(x)$	$y' = \frac{f'(x)}{\sqrt{1-f(x)^2}}$
$y = \operatorname{arccos} x$	$y' = \frac{-1}{\sqrt{1-x^2}}$	$y = \operatorname{arccos} f(x)$	$y' = \frac{-f'(x)}{\sqrt{1-f(x)^2}}$
$y = \operatorname{arc} \operatorname{tg} x$	$y' = \frac{1}{1+x^2}$	$y = \operatorname{arc} \operatorname{tg} f(x)$	$y' = \frac{f'(x)}{1+f(x)^2}$

¿La tabla te la sabes pero el ejercicio no sale?

En Alquimia lo trabajamos con exámenes reales, en grupos de seis alumnos.

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