

DERIBAZIOA: PROPIETATEAK ETA ERREGELAK

propietateak

$y = k \quad (k \in \mathbb{R})$	$y' = 0$
$y = kf(x) \quad (k \in \mathbb{R})$	$y' = kf'(x)$
$y = f(x) \pm g(x)$	$y' = f'(x) \pm g'(x)$
$y = f(x)g(x)$	$y' = f'(x)g(x) + f(x)g'(x)$
$y = \frac{f(x)}{g(x)}$	$y' = \frac{f'(x)g(x) - f(x)g'(x)}{(g(x))^2}$
$y = g(f(x))$	$y' = g'(f(x))f'(x)$

erregelak

$y = x^n$	$y' = nx^{n-1}$
$y = \sqrt[n]{x}$	$y' = \frac{1}{n\sqrt[n]{x^{n-1}}}$
$y = \ln(x)$	$y' = \frac{1}{x}$
$y = a^x \quad (a > 0)$	$y' = a^x \ln(a)$
$y = e^x$	$y' = e^x$
$y = \sin(x)$	$y' = \cos(x)$
$y = \cos(x)$	$y' = -\sin(x)$
$y = \tan(x) = \frac{\sin(x)}{\cos(x)}$	$y' = \frac{1}{\cos^2(x)} = 1 + \tan^2(x)$

FUNTZIO KONPOSATUEN DERIBAZIO ERREGELAK

$y = g(f(x))$	$y' = g'(f(x))f'(x)$	adibideak
$y = (f(x))^n$	$y' = n(f(x))^{n-1} f'(x)$	$y = \sin^3(x)$
$y = \sqrt[n]{f(x)}$	$y' = \frac{f'(x)}{n\sqrt[n]{(f(x))^{n-1}}}$	$y = \sqrt[4]{x^2 + 1}$
$y = \ln(f(x))$	$y' = \frac{f'(x)}{f(x)}$	$y = \ln(x^2)$
$y = a^{f(x)} \quad (a > 0)$	$y' = a^{f(x)} \ln(a) f'(x)$	$y = 7^{x^2 - 1}$
$y = e^{f(x)}$	$y' = e^{f(x)} f'(x)$	$y = e^{\sin(x)}$
$y = \sin(f(x))$	$y' = \cos(f(x)) f'(x)$	$y = \sin\left(\frac{1}{x}\right)$
$y = \cos(f(x))$	$y' = -\sin(f(x)) f'(x)$	$y = \cos\left(\frac{x+1}{x-1}\right)$
$y = \tan(f(x))$	$y' = \frac{f'(x)}{\cos^2(f(x))}$	$y = \tan(\ln(x))$