



BOLETÍN: DERIVADAS

Calcula la derivada de las siguientes funciones **simplificando** lo máximo posible:

$f(x) = 1 - x + x^3 - 2$	$y = (4x^3 - 2x^{-2} + 5x - 3)^5$	$f(x) = x^2 + \frac{2}{x} - 3\sqrt{x}$
$f(x) = \frac{2-x}{(1-x)^2}$	$f(x) = \frac{2-x}{x^2}$	$f(x) = \sqrt{x^2(1-x)}$
$f(x) = \frac{x+1}{x^2+3x+2}$	$f(x) = \frac{3x^3-2}{x^2}$	$f(x) = \frac{2x-x^2}{3x^3+1}$
$f(x) = \frac{e^x + e^{-x}}{2}$	$y = \frac{x^3}{\ln x}$	$f(x) = 10^{x^2}$
$f(x) = 2^{\frac{x-1}{x}}$	$f(x) = \frac{3e^x}{\sqrt{x}}$	$f(x) = \frac{1}{e^{2x}}$
$f(x) = \text{Log}(2x-1)$	$f(x) = \text{Log}(\sqrt{x})$	$f(x) = \text{Log}(x \cdot e^{2x})$
$f(x) = e^{\text{Log}(x^2)}$	$y = 5^x + x^5$	$f(x) = 2^x \cdot x^2$
$f(x) = e^{\ln\left(\frac{1}{x}\right)}$	$f(x) = \frac{e^{x^2} - e^{3x}}{3}$	$f(x) = \frac{e^x}{x^4}$
$f(x) = \sqrt[3]{x} \cdot (x^2+1)$	$f(x) = \frac{5^x \cdot x^5}{\sqrt{5x}}$	$f(x) = (2x+5)^x$
$f(x) = \text{Log}\left(\frac{2x-1}{3x}\right)$	$f(x) = \frac{(3-x)^2}{27-9x}$	$f(x) = 1 - \frac{e^x - 2}{x}$
$f(x) = e^x \cdot e^{1-x}$	$f(x) = \text{Log}(\sqrt{x^5})$	$f(x) = (x^2)^{\ln x}$
$y = \sqrt{e^x + x^3}$	$f(x) = \left(\frac{2}{x-1} - 1\right)^2$	$f(x) = \sqrt{\frac{1+x}{1-x}}$
$f(x) = \text{Log}(x^2-3)^3$	$f(x) = 4^{x^2-x+3}$	$f(x) = \left(\frac{1}{5}\right)^{x^2-2x}$
$f(x) = \sqrt[4]{x^{-1}} + \frac{2}{x} - 1$	$f(x) = -1 + \sqrt{2-x}$	$f(x) = \sqrt{\frac{1+e^x}{2}}$
$f(x) = 2^{x^2} \cdot 2^{\sqrt{x}}$	$f(x) = 7^{\text{Log}(x+2)}$	$f(x) = \sqrt[4]{4x^3-2x}$
$f(x) = x^2 \cdot e^x \cdot x^{1/2}$	$\frac{x^2}{5} + \frac{y^2}{7} = 1$	$y^7 - y^6 - 2x + 1 = 0$
$x^2 + y^2 - 5y - 1 = 0$	$y^2 - y \cdot x + 2x^2 - x + 2 = 0$	$x^3 - y \cdot x^2 - \sqrt[3]{x^2} = 1$