



## Calcul de dérivée



$f(x) = x + 2 - \frac{4e^x}{e^x + 3}$	$f'(x) = \left( \frac{e^x - 3}{e^x + 3} \right)^2$
$f(x) = \ln(e^x + 2e^{-x})$	$f'(x) = \frac{e^{2x} - 2}{e^{2x} + 2}$
$h(x) = \frac{1}{4} e^{-\frac{x}{2}} (x^2 + 2x)$	$h'(x) = \frac{e^{-\frac{x}{2}}}{8} (-x^2 + 2x + 4)$
$f(x) = (1+x)e^{-x}$	$f'(x) = -xe^{-x}$
$f(x) = \ln(1+xe^{-x})$	$f'(x) = \frac{e^{-x}(1-x)}{1+xe^{-x}}$
$f(x) = -(x^2 + 2x)e^{-x}$	$f'(x) = e^{-x}(x^2 - 2)$
$f(x) = \ln\left(\frac{2+x}{2-x}\right)$	$f'(x) = \frac{4}{4-x^2}$
$f_n(x) = 2x - 2 + \frac{\ln(x^2 + 1)}{n}$	$f'(x) = \frac{2nx^2 + 2x + 2n}{n(x^2 + 1)}$
$f(x) = 3e^{-2x} \left(\frac{3}{2} - e^{-x}\right)$	$f'(x) = 9e^{-2x}(e^{-x} - 1)$
$f(x) = x - \frac{\ln(x)}{x^2}$	$f'(x) = \frac{x^3 + 2\ln(x) - 1}{x^3}$
$f(x) = x + \ln(1+e^{-x})$	$f'(x) = \frac{1}{1+e^{-x}}$
$f(x) = \ln(1+x) - x + \frac{x^2}{2}$	$f'(x) = \frac{x^2}{1+x}$
$f(x) = (2x^3 - 4x^2)e^{-x}$	$f'(x) = e^{-x}(10x^2 - 8x - 2x^3)$
$f(x) = \frac{\ln(x+3)}{x+3}$	$f'(x) = \frac{1-\ln(x+3)}{(x+3)^2}$
$f(x) = (\ln(x+3))^2$	$f'(x) = \frac{2\ln(x+3)}{x+3}$
$f(x) = 1 - e^{-x} \left(1 + x + \frac{x^2}{2}\right)$	$f'(x) = \frac{x^2}{2}e^{-x}$
$f(x) = \frac{1}{4}xe^{-\frac{x}{2}}$	$f'(x) = \frac{1}{8}(2-x)e^{-\frac{x}{2}}$
$g(x) = \frac{1+x}{1+e^x}$	$g'(x) = \frac{1-xe^x}{(1+e^x)^2}$
$f(x) = x - \frac{\ln(1+x)}{1+x}$	$f'(x) = \frac{x^2 + 2x + \ln(1+x)}{(1+x)^2}$