Derivácia

I. $f(x) = x^n \rightarrow f'(x) = nx^{n-1}$

II. $f(x) = e^x \rightarrow f'(x) = e^x$

III. $f(x) = \ln(x) \rightarrow f'(x) = \dfrac{1}{x}$

IV. $(f \pm g)' = f' + g'$

V. $(fg)' = f'g + fg'$

VI. $\left(\dfrac{f}{g}\right)' = \dfrac{f'g - fg'}{g^2}$

VII. $(f(g))' = f'(g)\, g'$

$\sqrt{x} = x^{1/2} \qquad \dfrac{1}{x} = x^{-1}$

$a^x = e^{x \ln a}$

$\log_a x = \dfrac{\ln x}{\ln a}$

Zahřívací příklady

1) $f_1(x) = 2x^2 - 3x$

2) $f_2(x) = e^{x^2 + x}$

3) $f_3(x) = x \ln(x + 1)$

4) $f_4(x) = \dfrac{x+1}{2-3x}$

$f_1(x)' = 4x - 3$

$f_2(x)' = (2x + 1)e^{x^2 + x}$

$f_3(x)' = \ln(x + 1) + \dfrac{x}{x + 1}$

$f_4(x)' = \dfrac{-5}{(2 - 3x)^2}$