Vzorce pro derivování

Pro každé $x \in \mathbb{R}$, kde existuje vlastní derivace, platí:

$$(k)' = 0 \qquad \text{pro } k \in \mathbb{R},$$
$$(x)' = 1,$$
$$(x^a)' = a\,x^{a-1},$$
$$(\mathrm{e}^x)' = \mathrm{e}^x,$$
$$(\ln x)' = \tfrac{1}{x},$$
$$(a^x)' = a^x \,\ln a,$$
$$(\log_a x)' = \tfrac{1}{x \ln a},$$
$$(\sin x)' = \cos x,$$
$$(\cos x)' = -\sin x,$$
$$(\mathrm{tg}\, x)' = \tfrac{1}{\cos^2 x},$$
$$(\mathrm{cotg}\, x)' = -\tfrac{1}{\sin^2 x},$$
$$(\arcsin x)' = \tfrac{1}{\sqrt{1-x^2}},$$
$$(\arccos x)' = -\tfrac{1}{\sqrt{1-x^2}},$$
$$(\mathrm{arctg}\, x)' = \tfrac{1}{1+x^2},$$
$$(\mathrm{arccotg}\, x)' = -\tfrac{1}{1+x^2}$$

derivace operací:

$$(k \cdot f)' = k \cdot f', \qquad k \in \mathbb{R},$$
$$(f \pm g)' = f' \pm g',$$
$$(f \cdot g)' = f' \cdot g + f \cdot g',$$
$$\left(\frac{f}{g}\right)' = \frac{f' \cdot g - f \cdot g'}{g^2}$$

derivace složené funkce:

$$[f(g(x))]' = f'(g(x)) \cdot g'(x)$$