

Ako su funkcije $f, g : \mathcal{D} \rightarrow \mathbb{R}$ derivabilne na skupu $\mathcal{A} \subseteq \mathcal{D}$, tada za svaki $x \in \mathcal{A}$ vrijedi

$$\begin{aligned}(f + g)'(x) &= f'(x) + g'(x) \\(f - g)'(x) &= f'(x) - g'(x) \\(f \cdot g)'(x) &= f'(x) \cdot g(x) + f(x) \cdot g'(x) \\ \left(\frac{f}{g}\right)'(x) &= \frac{f'(x) \cdot g(x) - f(x) \cdot g'(x)}{g^2(x)}, \quad g(x) \neq 0.\end{aligned}$$

Tablica derivacija elementarnih funkcija

$$\begin{array}{ll} (c)' = 0, & c \in \mathbb{R} \\ (x^\alpha)' = \alpha x^{\alpha-1}, & \alpha \in \mathbb{R}, \quad x \in \mathbb{R} \\ (\log_a x)' = \frac{1}{x} \log_a e, & x > 0 \\ (\ln x)' = \frac{1}{x}, & x > 0 \\ (a^x)' = a^x \ln a, & x \in \mathbb{R} \\ (e^x)' = e^x, & x \in \mathbb{R} \\ (\sin x)' = \cos x, & x \in \mathbb{R} \\ (\cos x)' = -\sin x, & x \in \mathbb{R} \\ (\operatorname{tg} x)' = \frac{1}{\cos^2 x}, & x \neq (2k-1)\frac{\pi}{2}, \quad k \in \mathbb{Z} \end{array} \quad \begin{array}{ll} (\arcsin x)' = \frac{1}{\sqrt{1-x^2}}, & |x| < 1 \\ (\arccos x)' = \frac{-1}{\sqrt{1-x^2}}, & |x| < 1 \\ (\operatorname{arctg} x)' = \frac{1}{1+x^2}, & x \in \mathbb{R} \\ (\operatorname{arcctg} x)' = \frac{-1}{1+x^2}, & x \in \mathbb{R} \\ (\operatorname{ctg} x)' = \frac{-1}{\sin^2 x}, & x \neq k\pi, \quad k \in \mathbb{Z} \end{array}$$