Diferenciální počet

$(\text{konst.})' = 0$

$(x^\alpha)' = \alpha \cdot x^{\alpha-1}$

$(\mathrm{a}^x)' = \mathrm{a}^x \cdot \ln \mathrm{a}$

$(\log_{\mathrm{a}} x)' = \dfrac{1}{x \cdot \ln \mathrm{a}}$

$(\mathrm{e}^x)' = \mathrm{e}^x$

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

$(u \pm v)' = u' \pm v'$

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

$(\sin x)' = \cos x$

$(\cos x)' = -\sin x$

$(\mathrm{tg}\, x)' = \dfrac{1}{\cos^2 x}$

$(\mathrm{cotg}\, x)' = -\dfrac{1}{\sin^2 x}$

$(x)' = 1$

$\left(\dfrac{1}{x}\right)' = -\dfrac{1}{x^2}$

$(u \cdot v)' = u' \cdot v + u \cdot v'$

$f(x)^{g(x)} = \mathrm{e}^{g(x) \cdot \ln f(x)}$

$(\arcsin x)' = \dfrac{1}{\sqrt{1-x^2}}$

$(\arccos x)' = -\dfrac{1}{\sqrt{1-x^2}}$

$(\mathrm{arctg}\, x)' = \dfrac{1}{1+x^2}$

$(\mathrm{arccotg}\, x)' = -\dfrac{1}{1+x^2}$

$(\sqrt{x})' = \dfrac{1}{2 \cdot \sqrt{x}}$

$(\log x)' = \dfrac{1}{x \cdot \ln 10}$

$\left(\dfrac{u}{v}\right)' = \dfrac{u' \cdot v - u \cdot v'}{v^2}$

$(k \cdot f(x))' = k \cdot f'(x)$

Integrální počet

$\int x^\alpha \,\mathrm{d}x = \dfrac{x^{\alpha+1}}{\alpha+1} + C, \alpha \neq -1$

$\int \dfrac{1}{x} \,\mathrm{d}x = \ln|x| + C$

$\int \mathrm{a}^x \,\mathrm{d}x = \dfrac{\mathrm{a}^x}{\ln \mathrm{a}} + C$

$\int \mathrm{e}^x \,\mathrm{d}x = \mathrm{e}^x + C$

$\int \sin x \,\mathrm{d}x = -\cos x + C$

$\int \cos x \,\mathrm{d}x = \sin x + C$

$\int \dfrac{\mathrm{d}x}{\cos^2 x} = \mathrm{tg}\, x + C$

$\int \dfrac{\mathrm{d}x}{\sin^2 x} = -\mathrm{cotg}\, x + C$

$\int \dfrac{\mathrm{d}x}{\sqrt{1-x^2}} = \arcsin x + C$

$\int \dfrac{\mathrm{d}x}{1+x^2} = \mathrm{arctg}\, x + C$

$\int 0 \,\mathrm{d}x = C$

$\int \mathrm{d}x = x + C$

$\int k \cdot f(x) \,\mathrm{d}x = k \cdot \int f(x) \,\mathrm{d}x$

$\int (f(x) \pm g(x)) \,\mathrm{d}x = \int f(x) \,\mathrm{d}x \pm \int g(x) \,\mathrm{d}x$

$\int u' \cdot v = u \cdot v - \int u \cdot v'$

$\int_a^b u' \cdot v = [u \cdot v]_a^b - \int_a^b u \cdot v'$

$\int f(g(x)) \cdot g'(x) \,\mathrm{d}x = \left| \begin{matrix} g(x) = t \\ g'(x)\,\mathrm{d}x = \mathrm{d}t \end{matrix} \right| = \int f(t) \,\mathrm{d}t = \cdots = F(t) = F(g(x)) + C$

$\int f(ax+b) \,\mathrm{d}x = \frac{1}{a} F(ax+b) + C$ (pro $F'(x) = f(x)$)

$\int \dfrac{g'(x)}{g(x)} \,\mathrm{d}x = \ln|g(x)| + C$

$\int_a^b f(g(x)) \cdot g'(x) \,\mathrm{d}x = \left| \begin{matrix} g(x) = t & a \to g(a) \\ g'(x)\mathrm{d}x = \mathrm{d}t & b \to g(b) \end{matrix} \right| = \int_{g(a)}^{g(b)} f(t) \,\mathrm{d}t = [F(t)]_{g(a)}^{g(b)} = F(g(b)) - F(g(a))$