Nechť f a g jsou funkce, $c \in \mathbb{R}$.

- $(f \pm g)' = f' \pm g'$,
- $(c \cdot f)' = c \cdot f'$,
- $[f(g(x))]' = f'(g(x)) \cdot g'(x)$,
- $(f \cdot g)' = f'g + fg'$,
- $\left(\frac{f}{g}\right)' = \frac{f'g - fg'}{g^2}$.

Nechť $a, b, c, \alpha \in \mathbb{R}$ $\quad (a, b > 0,\ \alpha \neq 0,\ b \neq 1)$.

- $(c)' = 0$,
- $(x^\alpha)' = \alpha x^{\alpha-1}$,
- $(\mathrm{e}^x)' = \mathrm{e}^x$,
- $(a^x)' = a^x \cdot \ln a$,
- $(\ln x)' = \frac{1}{x}$,
- $(\log_b x)' = \frac{1}{x \cdot \ln b}$,
- $(\sin x)' = \cos x$,
- $(\cos x)' = -\sin x$.
- $(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$,
- $(\operatorname{cotg} x)' = \frac{-1}{\sin^2 x}$,
- $(\arcsin x)' = \frac{1}{\sqrt{1-x^2}}$,
- $(\arccos x)' = \frac{-1}{\sqrt{1-x^2}}$,
- $(\operatorname{arctg} x)' = \frac{1}{1+x^2}$,
- $(\operatorname{arccotg} x)' = \frac{-1}{1+x^2}$.

Nechť $A, B, a, c, k, n \in \mathbb{R}$ $\quad (A, B \neq 0,\ a > 0, a \neq 1,\ n \neq -1)$.

- $\int k \, \mathrm{d}x = kx + c$,
- $\int x^n \, \mathrm{d}x = \frac{x^{n+1}}{n+1} + c$,
- $\int \frac{1}{x} \, \mathrm{d}x = \ln|x| + c$,
- $\int a^x \, \mathrm{d}x = \frac{a^x}{\ln a} + c$,
- $\int \mathrm{e}^x \, \mathrm{d}x = \mathrm{e}^x + c$,
- $\int \sin x \, \mathrm{d}x = -\cos x + c$,
- $\int \cos x \, \mathrm{d}x = \sin x + c$,
- $\int \frac{1}{\cos^2 x} \, \mathrm{d}x = \operatorname{tg} x + c$,
- $\int \frac{1}{\sin^2 x} \, \mathrm{d}x = -\operatorname{cotg} x + c$,
- $\int \frac{1}{\sqrt{A^2 - x^2}} \, \mathrm{d}x = \arcsin \frac{x}{A} + c$,
- $\int \frac{1}{\sqrt{x^2 \pm B}} \, \mathrm{d}x = \ln|x + \sqrt{x^2 \pm B}| + c$,
- $\int \frac{1}{A^2 + x^2} \, \mathrm{d}x = \frac{1}{A} \operatorname{arctg} \frac{x}{A} + c$,
- $\int \frac{1}{A^2 - x^2} \, \mathrm{d}x = \frac{1}{2A} \ln \left| \frac{A+x}{A-x} \right| + c$.

Nechť f a g jsou funkce, $k, c \in \mathbb{R}$.

- $\int [f(x) \pm g(x)] \, \mathrm{d}x = \int f(x) \, \mathrm{d}x \pm \int g(x) \, \mathrm{d}x$,
- $\int k \cdot f(x) \, \mathrm{d}x = k \cdot \int f(x) \, \mathrm{d}x$,
- $\int \frac{f'(x)}{f(x)} \, \mathrm{d}x = \ln|f(x)| + c$.

Nechť F je primitivní funkce k funkci f $(a, b \in \mathbb{R})$.

- $\int_a^b f(x) \, \mathrm{d}x = F(b) - F(a)$.

Integrování per partes $\left[u = u(x), v = v(x)\right]$.

$$\int uv' \, \mathrm{d}x = uv - \int u'v \, \mathrm{d}x.$$

Substituční metoda.

$$\int f(x) \, \mathrm{d}x = \begin{vmatrix} x = h(t) \\ \mathrm{d}x = h'(t) \, \mathrm{d}t \end{vmatrix} = \int f(h(t))h'(t) \, \mathrm{d}t,$$

$$\int f(g(x))g'(x) \, \mathrm{d}x = \begin{vmatrix} g(x) = t \\ g'(x) \, \mathrm{d}x = \mathrm{d}t \end{vmatrix} = \int f(t) \, \mathrm{d}t.$$

Délka křivky.

$$\ell = \int_a^b \sqrt{1 + f'^2(x)} \, \mathrm{d}x.$$

Povrch pláště a objem rotačního tělesa (rotace f kolem osy x).

$$P = 2\pi \int_a^b f(x) \sqrt{1 + f'^2(x)} \, \mathrm{d}x,$$

$$V = \pi \int_a^b f^2(x) \, \mathrm{d}x.$$