

$$\int k f(x) dx = k \int f(x) dx$$

$$\int (f(x) \pm g(x)) dx = \int f(x) dx \pm \int g(x) dx$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + c \quad x \in \mathbb{R}, n \in \mathbb{N} \cup \{0\}$$

$$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + c \quad x \in (0, \infty), n \in \mathbb{R}, n \neq -1$$

$$\int \frac{1}{x} dx = \ln|x| + c \quad x \neq 0$$

$$\int a^x dx = \frac{a^x}{\ln a} + c \quad x \in \mathbb{R}, a > 0, a \neq 1 \text{ je konstanta}$$

$$\int \sin x dx = -\cos x + c \quad x \in \mathbb{R}$$

$$\int \cos x dx = \sin x + c \quad x \in \mathbb{R}$$

$$\int \frac{1}{\sin^2 x} dx = -\cot x + c \quad x \in (k\pi, (k+1)\pi), k \in \mathbb{Z}$$

$$\int \frac{1}{\cos^2 x} dx = \tan x + c \quad x \in ((2k-1)\frac{\pi}{2}, (2k+1)\frac{\pi}{2}), k \in \mathbb{Z}$$

$$\int \frac{1}{\sqrt{1-x^2}} dx = \arcsin x + c \quad x \in (-1, 1)$$

$$\int \frac{1}{1+x^2} dx = \arctan x + c \quad x \in \mathbb{R}$$

$$\int \sinh x dx = \cosh x + c \quad x \in \mathbb{R}$$

$$\int \cosh x dx = \sinh x + c \quad x \in \mathbb{R}$$

$$\int \frac{1}{\cosh^2 x} dx = \operatorname{tgh} x + c \quad x \in \mathbb{R}$$

$$\int \frac{1}{\sinh^2 x} dx = \operatorname{cotgh} x + c \quad x \neq 0$$

!!! Neexistují univerzální vzorce pro integrály typu

$$\int f(x) \cdot g(x) dx, \quad \int \frac{f(x)}{g(x)} dx, \quad \int f(g(x)) dx.$$