

## Tablica neodredenih integrala

$$\int dx = x + C$$

$$\int \frac{dx}{x} = \ln x + C$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad n \in \mathbb{Z} \setminus \{-1\}$$

$x \neq 0$  ako je  $n < 0$

$$\int e^x dx = e^x + C$$

$$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C, \quad \alpha \in \mathbb{R} \setminus \{-1\}, x > 0,$$

$$\int a^x dx = \frac{a^x}{\ln a} + C, \quad a > 0, a \neq 1$$

$$\int \sin x dx = -\cos x + C$$

$$\int \operatorname{sh} x dx = \operatorname{ch} x + C$$

$$\int \cos x dx = \sin x + C$$

$$\int \operatorname{ch} x dx = \operatorname{sh} x + C$$

$$\int \operatorname{tg} x dx = -\ln |\cos x| + C, \quad (x \neq (2k+1)\frac{\pi}{2})$$

$$\int \operatorname{th} x dx = \ln \operatorname{ch} x + C$$

$$\int \operatorname{ctg} x dx = \ln |\sin x| + C, \quad (x \neq 2k\pi)$$

$$\int \operatorname{cth} x dx = \ln |\operatorname{sh} x| + C$$

$$\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C, \quad (x \neq (2k+1)\frac{\pi}{2})$$

$$\int \frac{dx}{\operatorname{ch}^2 x} = \operatorname{th} x + C$$

$$\int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + C, \quad (x \neq 2k\pi)$$

$$\int \frac{dx}{\operatorname{sh}^2 x} = -\operatorname{cth} x + C, \quad x \neq 0$$

$$\int \frac{dx}{a^2 + x^2} = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C, \quad x \neq a$$

$$\int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin \frac{x}{a} + C, \quad |x| < a$$

$$\int \frac{dx}{a^2 - x^2} = \frac{1}{2a} \ln \left| \frac{a+x}{a-x} \right| + C, \quad a \neq 0$$

$$\int \frac{dx}{\sqrt{a^2 + x^2}} = \ln(x + \sqrt{a^2 + x^2}) + C$$

$$\int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + C, \quad a \neq 0$$

$$\int \frac{dx}{\sqrt{x^2 - a^2}} = \ln|x + \sqrt{x^2 - a^2}| + C, \quad |x| > a$$