

Таблица неодређених интеграла

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

$$\int \frac{1}{x} dx = \ln |x| + C$$

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

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

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

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

$$\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C$$

$$\int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + C$$

$$\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C$$

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

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

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

Неки важни интеграли

Нека за реалан број a важи $a > 0$. Тада је:

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

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

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

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

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

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

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

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