Таблиця основних невизначених інтегралів

1) $\int 0\,dx = C$;

2) $\int x^{\alpha}\,dx = \dfrac{x^{\alpha+1}}{\alpha+1} + C,\ \alpha \neq -1$;

3) $\displaystyle\int \frac{1}{x}\,dx = \ln|x| + C$;

4) $\int a^{x}\,dx = \dfrac{a^{x}}{\ln a} + C,\ a > 0, a \neq 1$;

5) $\int \cos x\,dx = \sin x + C$;

6) $\int \sin x\,dx = -\cos x + C$;

7) $\displaystyle\int \frac{1}{\cos^2 x}\,dx = \operatorname{tg} x + C$;

8) $\displaystyle\int \frac{1}{\sin^2 x}\,dx = -\operatorname{ctg} x + C$;

9) $\int \operatorname{ch} x\,dx = \operatorname{sh} x + C$;

10) $\int \operatorname{sh} x\,dx = \operatorname{ch} x + C$.

11) $\displaystyle\int \frac{1}{\operatorname{ch}^2 x}\,dx = \operatorname{th} x + C$;

12) $\displaystyle\int \frac{1}{\operatorname{sh}^2 x}\,dx = -\operatorname{cth} x + C$.

13) $\displaystyle\int \frac{1}{x^2 + a^2}\,dx = \frac{1}{a}\operatorname{arctg}\frac{x}{a} + C$;

14) $\displaystyle\int \frac{1}{\sqrt{a^2 - x^2}}\,dx = \arcsin\frac{x}{a} + C$;

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

16) $\displaystyle\int \frac{1}{\sqrt{x^2 \pm a^2}}\,dx = \ln\left|x + \sqrt{x^2 \pm a^2}\right| + C$.