

Таблиця інтегралів

1. $\int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad (n \neq -1)$
2. $\int \frac{dx}{x} = \ln x + C$
3. $\int e^x dx = e^x + C$
4. $\int a^x dx = \frac{a^x}{\ln a} + C$
5. $\int \sin x dx = -\cos x + C$
6. $\int \cos x dx = \sin x + C$
7. $\int \frac{dx}{\sin^2 x} = -\operatorname{ctgx} + C$
8. $\int \frac{dx}{\cos^2 x} = \operatorname{tgx} + C$
9. $\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C$
10. $\int \frac{dx}{1+x^2} = \operatorname{arctgx} + C$
11. $\int \frac{dx}{\sqrt{a^2-x^2}} = \arcsin \frac{x}{a} + C$
12. $\int \frac{dx}{a^2+x^2} = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$
13. $\int \frac{dx}{a^2-x^2} = \frac{1}{2a} \ln \left| \frac{a+x}{a-x} \right| + C$
14. $\int \frac{dx}{x^2-a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + C$
15. $\int \frac{dx}{\sqrt{x^2 \pm a}} = \ln \left| x + \sqrt{x^2 \pm a} \right| + C$