Таблица интегралов - основные формулы

1. $\int 0\,dx = C$

2. $\int a\,dx = ax + C$

3. $\int x^n\,dx = \dfrac{x^{n+1}}{n+1} + C,\ (n \neq 1)$

4. $\int \dfrac{dx}{x} = \ln|x| + C$

5. $\int a^x\,dx = \dfrac{a^x}{lnx} + C$

6. $\int e^x\,dx = e^x + C$

7. $\int \sin x\,dx = -\cos x + C$

8. $\int \cos x\,dx = \sin x + C$

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

10. $\int \dfrac{dx}{\cos^2 x} = \operatorname{tg} x + C$

11. $\int \dfrac{dx}{\sqrt{a^2 - x^2}} = \arcsin \dfrac{x}{a} + C = -\arccos \dfrac{x}{a} + C,\ (x < a)$

12. $\int \dfrac{dx}{a^2 + x^2} = \dfrac{1}{a}\operatorname{arctg} \dfrac{x}{a} + C = -\dfrac{1}{a}\operatorname{arcctg} \dfrac{x}{a} + C$

13. $\int \dfrac{dx}{a^2 - x^2} = \dfrac{1}{2a}\ln\left|\dfrac{a+x}{a-x}\right| + C,\ (x \neq a)$

14. $\int \dfrac{dx}{\sqrt{x^2 \pm a^2}} = \ln|x + \sqrt{x^2 \pm a^2}| + C$