	Таблица производных	Таблица интегралов
1	$(C)' = 0, \quad x' = 1, \quad (x^2)' = 2x$	$\int dx = x + C$
2	$(x^a)' = ax^{a-1}$	$\int x^a\,dx = \frac{x^{a+1}}{a+1} + C, \quad a \neq -1$
3	$(\sqrt{x})' = \frac{1}{2\sqrt{x}}, \quad \left(\frac{1}{x}\right)' = -\frac{1}{x^2}$	$\int \frac{dx}{\sqrt{x}} = 2\sqrt{x} + C, \quad \int \frac{dx}{x^2} = -\frac{1}{x} + C$
4	$(a^x)' = a^x \ln a, \ (e^x)' = e^x$	$\int a^x\,dx = \frac{a^x}{\ln a} + C, \quad \int e^x\,dx = e^x + C$
5	$(\log_a x)' = \frac{1}{x \ln a}, \quad (\ln x)' = \frac{1}{x}$	$\int \frac{dx}{x} = \ln\lvert x\rvert + C$
6	$(\sin x)' = \cos x$	$\int \cos x\ dx = \sin x + C$
7	$(\cos x)' = -\sin x$	$\int \sin x\ dx = -\cos x + C$
8	$(\operatorname{tg} x)' = \frac{1}{\cos^2 x}$	$\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C$
9	$(\operatorname{ctg} x)' = -\frac{1}{\sin^2 x}$	$\int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + C$
10	$(\arcsin x)' = \frac{1}{\sqrt{1-x^2}}$, $(\arccos x)' = -\frac{1}{\sqrt{1-x^2}}$	$\int \frac{dx}{\sqrt{a^2-x^2}} = \arcsin\frac{x}{a} + C$
11	$(\operatorname{arctg} x)' = \frac{1}{1+x^2}, (\operatorname{arcctg} x)' = -\frac{1}{1+x^2}$	$\int \frac{dx}{x^2+a^2} = \frac{1}{a}\operatorname{arctg}\frac{x}{a} + C$
12	$(\operatorname{sh} x)' = \operatorname{ch} x$	$\int \operatorname{ch} x\ dx = \operatorname{sh} x + C$
13	$(\operatorname{ch} x)' = \operatorname{sh} x$	$\int \operatorname{sh} x\ dx = \operatorname{ch} x + C$
14	$(\operatorname{th} x)' = \frac{1}{\operatorname{ch}^2 x}$	$\int \frac{dx}{\operatorname{ch}^2 x} = \operatorname{th} x + C$
15	$(\operatorname{cth} x)' = -\frac{1}{\operatorname{sh}^2 x}$	$\int \frac{dx}{\operatorname{sh}^2 x} = -\operatorname{cth} x + C$
16	$(\operatorname{arsh} x)' = \frac{1}{\sqrt{x^2+1}}$	$\int \frac{dx}{\sqrt{x^2+a^2}} = \ln\left\lvert x + \sqrt{x^2+a^2}\right\rvert + C = \operatorname{arsh}\frac{x}{a} + C$
17	$(\operatorname{arch} x)' = \frac{1}{\sqrt{x^2-1}}$	$\int \frac{dx}{\sqrt{x^2-a^2}} = \ln\left\lvert x + \sqrt{x^2-a^2}\right\rvert + C = \operatorname{arch}\frac{x}{a} + C$
18	$(\operatorname{arth} x)' = (\operatorname{arcth} x)' = \frac{1}{1-x^2}$	$\int \frac{dx}{x^2-a^2} = \frac{1}{2a}\ln\left\lvert\frac{x-a}{x+a}\right\rvert + C$