Таблицы

	неопределенных интегралов	производных
1.	$\int 1\cdot dx = x + C$;	$(x)' = 1$
2.	$\int x^{\alpha}\, dx = \dfrac{x^{\alpha+1}}{\alpha+1} + C \quad (\alpha \neq -1)$;	$(x^{\alpha})' = \alpha x^{\alpha-1}$
3.	$\int \dfrac{dx}{x} = \ln\lvert x\rvert + C$;	$(\ln x)' = \dfrac{1}{x}$
4.	$\int \sin x \cdot dx = -\cos x + C$;	$(\sin x)' = \cos x$
5.	$\int \cos x \cdot dx = \sin x + C$;	$(\cos x)' = -\sin x$
6.	$\int \dfrac{dx}{\cos^2 x} = \mathrm{tg}\, x + C$;	$(\mathrm{tg} x)' = \dfrac{1}{\cos^2 x}$
7.	$\int \dfrac{dx}{\sin^2 x} = -\mathrm{ctg}\, x + C$;	$(\mathrm{ctg} x)' = -\dfrac{1}{\sin^2 x}$
8.	$\int a^x\, dx = \dfrac{a^x}{\ln a} + C$;	$(a^x)' = a^x \cdot \ln a$
9.	$\int e^x\, dx = e^x + C$;	$(e^x)' = e^x$
10.	$\int \dfrac{dx}{1+x^2} = \begin{cases} \mathrm{arctg}\, x + C \\ -\mathrm{arcctg}\, x + C \end{cases}$;	$(\mathrm{arctg}\, x)' = \dfrac{1}{x^2+1}$
11.	$\int \dfrac{dx}{\sqrt{1-x^2}} = \begin{cases} \arcsin x + C \\ -\arccos x + C \end{cases}$;	$(\mathrm{arcctg}\, x)' = -\dfrac{1}{x^2+1}$
12.	$\int \dfrac{dx}{a^2+x^2} = \begin{cases} \dfrac{1}{a}\mathrm{arctg}\dfrac{x}{a} + C \\ -\dfrac{1}{a}\mathrm{arcctg}\dfrac{x}{a} + C \end{cases} \quad (a > 0)$;	$(\arcsin x)' = \dfrac{1}{\sqrt{1-x^2}}$
13.	$\int \dfrac{dx}{\sqrt{a^2-x^2}} = \begin{cases} \arcsin\dfrac{x}{a} + C \\ -\arccos\dfrac{x}{a} + C \end{cases} \quad (a > 0)$;	$(\arccos x)' = -\dfrac{1}{\sqrt{1-x^2}}$
14.	$\int \dfrac{dx}{\sqrt{x^2 \pm a^2}} = \ln\left(x + \sqrt{x^2 \pm a^2}\right) + C \quad (a > 0)$;	$\left(\ln(x + \sqrt{x^2 \pm a^2}\,)\right)' = \dfrac{1}{\sqrt{x^2 \pm a^2}}$
15.	$\int \dfrac{dx}{x^2-a^2} = \dfrac{1}{2a}\ln\left\lvert\dfrac{x-a}{x+a}\right\rvert + C \quad (a > 0)$;	
16.	$\int \mathrm{sh}\, x \cdot dx = \mathrm{ch}\, x + C$;	$(\mathrm{ch}\, x)' = \mathrm{sh}\, x$
17.	$\int \mathrm{ch}\, x \cdot dx = \mathrm{sh}\, x + C$.	$(\mathrm{sh} x)' = \mathrm{ch}\, x$