

ТАБЛИЦА ИНТЕГРАЛОВ

$\int 0 \cdot dx = C$	$\int \frac{1}{\cos^2 x} dx = \operatorname{tg} x + C$
$\int 1 \cdot dx = x + C$	$\int \frac{1}{\sin^2 x} dx = -\operatorname{ctg} x + C$
$\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C, (\alpha \neq -1)$	$\int \frac{1}{\sin x} dx = \ln \left \operatorname{tg} \frac{x}{2} \right + C$
$\int e^x dx = e^x + C$	$\int \frac{1}{\cos x} dx = \ln \left \operatorname{tg} \left(\frac{x}{2} + \frac{\pi}{4} \right) \right + C$
$\int \frac{1}{x} dx = \ln x + C$	$\int \frac{1}{\sqrt{1+x^2}} dx = \begin{cases} \operatorname{arcsin} x + C \\ -\operatorname{arccos} x + C \end{cases}$
$\int \frac{1}{\sqrt{1+x^2}} dx = \begin{cases} \operatorname{arcsin} x + C \\ -\operatorname{arccos} x + C \end{cases}$	$\int \frac{1}{\sqrt{a^2-x^2}} dx = \begin{cases} \operatorname{arcsin} \frac{x}{a} + C \\ -\operatorname{arccos} \frac{x}{a} + C \end{cases}$
$\int \frac{1}{1+x^2} dx = \begin{cases} \operatorname{arctg} x + C \\ -\operatorname{arctg} x + C \end{cases}$	$\int \frac{1}{a^2+x^2} dx = \begin{cases} \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C \\ -\frac{1}{a} \operatorname{arctg} \frac{x}{a} + C \end{cases}$
$\int a^x dx = \frac{a^x}{\ln a} + C$	$\int \frac{1}{a^2-x^2} dx = \frac{1}{2a} \ln \left \frac{a+x}{a-x} \right + C$
$\int \sin x dx = -\cos x + C$	
$\int \cos x dx = \sin x + C$	
$\int \operatorname{tg} x dx = -\ln \cos x + C$	
$\int \operatorname{ctg} x dx = \ln \sin x + C$	