Таблица интегралов и дифференциалов

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Интегралы	Дифференциалы
$\int 0 \cdot \partial x = C$	$\partial(c) = 0, c = const$
$\int 1 \cdot \partial x = \int \partial x = x + C$	$\partial(x^n) = nx^{n-1}\partial x$
$\int x^n \partial x = \frac{x^{n+1}}{n+1} + C, n \neq -1, x > 0$	$\partial(a^x) = a^x \cdot \ln a \partial x$
$\int \frac{\partial x}{x} = \ln \lvert x \rvert + C$	$\partial(e^x) = e^x \partial x$
$\int a^x \partial x = \frac{a^x}{\ln a} + C, a > 0$	$\partial(\log_a x) = \frac{\partial x}{x \ln a}$
$\int e^x \partial x = e^x + C$	$\partial(\ln x) = \frac{\partial x}{x}$
$\int \cos x \partial x = \sin x + C$	$\partial(\sin x) = \cos x \partial x$
$\int \sin x \partial x = -\cos x + C$	$\partial(\cos x) = -\sin x \partial x$
$\int \frac{\partial x}{\cos^2 x} = \operatorname{tg} x + C$	$\partial(\sqrt{x}) = \frac{\partial x}{2\sqrt{x}}$
$\int \frac{\partial x}{\sin^2 x} = -\operatorname{ctg} x + C$	$\partial(\operatorname{tg} x) = \frac{\partial x}{\cos^2 x}$
$\int \frac{\partial x}{\sqrt{a^2 - x^2}} = \arcsin \frac{x}{a} + C$	$\partial(\operatorname{ctg} x) = -\frac{\partial x}{\sin^2 x}$
$\int \frac{\partial x}{a^2 + x^2} = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$	$\partial(\arcsin x) = \frac{\partial x}{\sqrt{1-x^2}}$
	$\partial(\arccos x) = -\frac{\partial x}{\sqrt{1-x^2}}$
	$\partial(\operatorname{arctg} x) = \frac{\partial x}{1+x^2}$
	$\partial(\operatorname{arcctg} x) = -\frac{\partial x}{1+x^2}$