Basic Differentiation Rules	Basic Integration Rules
$\frac{d}{dx}C = 0$	$\int 0 \, dx = C$
$\frac{d}{dx}(kx) = k$	$\int k \, dx = kx + C$
$\frac{d}{dx}[kf(x)] = kf'(x)$	$\int [kf(x)] \, dx = k \int f(x) \, dx$
$\frac{d}{dx}[f(x) \pm g(x)] = f'(x) \pm g'(x)$	$\int [f(x) \pm g(x)] \, dx = \int f(x) \, dx \pm \int g(x) \, dx$
$\frac{d}{dx}x^n = nx^{n-1}$	$\int x^n \, dx = \frac{x^{n+1}}{n+1} + C, n \neq -1$ (Power Rule)
$\frac{d}{dx}\sin x = \cos x$	$\int \cos x \, dx = \sin x + C$
$\frac{d}{dx}\cos x = -\sin x$	$\int \sin x \, dx = -\cos x + C$
$\frac{d}{dx}\tan x = \sec^2 x$	$\int \sec^2 x \, dx = \tan x + C$
$\frac{d}{dx}\cot x = -\csc^2 x$	$\int \csc^2 x \, dx = -\cot x + C$
$\frac{d}{dx}\sec x = \sec x \tan x$	$\int \sec x \tan x \, dx = \sec x + C$
$\frac{d}{dx}\csc x = -\csc x \cot x$	$\int \csc x \cot x \, dx = -\csc x + C$
$\frac{d}{dx}e^x = e^x$	$\int e^x \, dx = e^x + C$
$\frac{d}{dx}\ln x = \frac{1}{x}, x > 0$	$\int \frac{1}{x} \, dx = \ln \lvert x \rvert + C$

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