In the table below, c and n denote any constants, while b denotes any positive constant except for $b = 1$. The function G denotes an antiderivative of the function g.

Definition. G is called an *antiderivative* of g on an interval I if $\frac{d}{dx}G(x) = g(x)$ for all $x \in I$.
(Cf. Stewart's textbook, p. 350.)

TABLE 1. **Basic Derivative & Antiderivative Formulas**

$f(x)$	$f'(x)$	$g(x)$	$G(x)$
c	0	0	c
x	1	1	x
x^n	nx^{n-1}	x^n	$\frac{x^{n+1}}{n+1} \quad (n \neq -1)$
$\ln\|x\|$	$\frac{1}{x}$	$\frac{1}{x}$	$\ln\|x\|$
$\log_b\|x\|$	$\frac{1}{x \ln b}$	*	*
e^x	e^x	e^x	e^x
b^x	$b^x \ln b$	b^x	$\frac{b^x}{\ln b}$
$\sin x$	$\cos x$	$\cos x$	$\sin x$
$\cos x$	$-\sin x$	$\sin x$	$-\cos x$
$\tan x$	$\sec^2 x$	$\sec^2 x$	$\tan x$
$\cot x$	$-\csc^2 x$	$\csc^2 x$	$-\cot x$
$\sec x$	$\sec x \tan x$	$\sec x \tan x$	$\sec x$
$\csc x$	$-\csc x \cot x$	$\csc x \cot x$	$-\csc x$

$f(x)$	$f'(x)$	$g(x)$	$G(x)$
$\sin^{-1} x$	$\dfrac{1}{\sqrt{1-x^2}}$	$\dfrac{1}{\sqrt{1-x^2}}$	$\sin^{-1} x$
$\cos^{-1} x$	$-\dfrac{1}{\sqrt{1-x^2}}$	$*$	$*$
$\tan^{-1} x$	$\dfrac{1}{1+x^2}$	$\dfrac{1}{1+x^2}$	$\tan^{-1} x$
$\cot^{-1} x$	$-\dfrac{1}{1+x^2}$	$*$	$*$
$\sec^{-1} x$	$\dfrac{1}{x\sqrt{x^2-1}}$	$\dfrac{1}{x\sqrt{x^2-1}}$	$\sec^{-1} x$
$\csc^{-1} x$	$-\dfrac{1}{x\sqrt{x^2-1}}$	$*$	$*$

A row with asterisks ($*$) indicate that the antiderivative formula in the row immediately above it is used to evaluate integrals.