Table of antiderivatives

I skip $+C$ in the right-hand expression

Powers and logarithms

x^a	$\begin{cases} \frac{1}{a+1}x^{a+1} & a \neq -1 \\ \log \lvert x \rvert & a = -1 \end{cases}$
$x^\alpha \log x$	$(\alpha+1)^{-1}x^{\alpha+1}\log x - (\alpha+1)^{-2}x^{\alpha+1}$

Exponents

e^x	e^x
a^x	$(\log a)^{-1}a^x$
xe^x	$(x-1)e^x$
e^x	e^x

Trigonometric functions

$\cos x$	$\sin x$
$\sin x$	$-\cos x$
$\tan x$	$-\log \lvert \cos x \rvert$
$\cot x$	$\log \lvert \sin x \rvert$
$\sec^2 x$	$\tan x$
$\csc^2 x$	$-\cot x$

Hyperbolic functions

$\cosh x$	$\sinh x$
$\sinh x$	$\cosh x$
$\tanh x$	$\log \cosh x$
$\coth x$	$\log \lvert \sinh x \rvert$
$\sinh^{-2} x$	$\tanh x$
$\cosh^{-2} x$	$-\coth x$

Rational functions

$\frac{1}{1+x^2}$	$\arctan x$
$\frac{x}{1+x^2}$	$\frac{1}{2}\log(1+x^2)$
$\frac{1}{1-x^2}$	$\frac{1}{2}\log\frac{\lvert 1-x\rvert}{\lvert 1+x\rvert}$
$\frac{x}{1-x^2}$	$-\frac{1}{2}\log\lvert 1-x^2\rvert$

Irrational functions

$\frac{1}{\sqrt{1-x^2}}$	$\arcsin x$
$\frac{1}{\lvert x\rvert\sqrt{x^2-1}}$	$-\operatorname{arcsec} x$
$\frac{1}{\sqrt{1+x^2}}$	$\log(x+\sqrt{1+x^2})$
$\frac{1}{\lvert x\rvert\sqrt{1+x^2}}$	$-\log(1+\sqrt{1+x^2})+\log\lvert x\rvert$
$\frac{1}{\sqrt{x^2-1}}$	$\log(x+\sqrt{x^2-1})$
$\frac{1}{\lvert x\rvert\sqrt{1-x^2}}$	$-\log(1+\sqrt{1-x^2})+\log\lvert x\rvert$

Misc functions

$e^{ax}\cos(bx)$	$\frac{1}{a^2+b^2}e^{ax}\left(a\cos bx+b\sin bx\right)$
$e^{ax}\sin(bx)$	$\frac{1}{a^2+b^2}e^{ax}\left(a\sin bx-b\cos bx\right)$