SOME ELEMENTARY ANTIDERIVATIVES

Constants of integration not shown.

(1) $$\int x^p\,dx = \frac{1}{p+1}x^{p+1},\ \ p \neq -1$$

(2) $$\int \frac{1}{x}\,dx = \ln|x|$$

(3) $$\int e^x\,dx = e^x$$

(4) $$\int b^x\,dx = \frac{1}{\ln b}\,b^x$$

(5) $$\int \ln x\,dx = x\ln x - x$$

(6) $$\int \log_b x\,dx = \frac{1}{\ln b}(x\ln x - x)$$

(7) $$\int \sin x\,dx = -\cos x$$

(8) $$\int \cos x\,dx = \sin x$$

(9) $$\int \tan x\,dx = \ln|\sec x|$$

(10) $$\int \cot x\,dx = -\ln|\csc x|$$

(11) $$\int \sec x\,dx = \ln|\sec x + \tan x|$$

(12) $$\int \csc x\,dx = \ln|\csc x - \cot x|$$

(13) $$\int \sec^2 x\,dx = \tan x$$

(14) $$\int \csc^2 x\,dx = -\cot x$$

(15) $$\int \sec x\tan x\,dx = \sec x$$

(16) $$\int \csc x\cot x\,dx = -\csc x$$

(17) $$\int \frac{1}{a^2+x^2}\,dx = \frac{1}{a}\tan^{-1}\frac{x}{a}$$

(18) $$\int \frac{1}{a^2-x^2}\,dx = \frac{1}{2a}\ln\left|\frac{x+a}{x-a}\right|$$

(19) $$\int \frac{1}{\sqrt{a^2-x^2}}\,dx = \sin^{-1}\frac{x}{a}$$

(20) $$\int \frac{1}{\sqrt{x^2\pm a^2}}\,dx = \ln|x+\sqrt{x^2\pm a^2}|$$