

Indefinite Integrals

1 Table of Indefinite Integrals

$$\int [f(x) + g(x)] dx = \int f(x) dx + \int g(x) dx \quad \int cf(x) dx = c \int f(x) dx$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C \quad (n \neq -1) \quad \int \frac{1}{x} dx = \ln |x| + C$$

$$\int e^x dx = e^x + C \quad \int a^x dx = \frac{a^x}{\ln a} + C$$

$$\int \sin x dx = -\cos x + C \quad \int \cos x dx = \sin x + C$$

$$\int \sec^2 x dx = \tan x + C \quad \int \csc^2 x dx = -\cot x + C$$

$$\int \sec x \tan x dx = \sec x + C \quad \int \csc x \cot x dx = -\csc x + C$$

$$\int \frac{1}{x^2 + 1} dx = \tan^{-1} x + C \quad \int \frac{1}{\sqrt{1-x^2}} dx = \sin^{-1} x + C$$