Math133-Table of (Indefinite) Integral

$$\int cf(x)\mathrm{d}x = c\int f(x)\mathrm{d}x \qquad\qquad \int [f(x) + g(x)]\mathrm{d}x = \int f(x)\mathrm{d}x + \int g(x)\mathrm{d}x$$

$$\boxed{\int k\mathrm{d}x = kx + C} \qquad\qquad \int_a^b k\mathrm{d}x = k(b-a)$$

$$\boxed{\int x^n\mathrm{d}x = \frac{x^{n+1}}{n+1} + C \ (n \neq -1)} \qquad \boxed{\int \frac{1}{x}\mathrm{d}x = \ln|x| + C}$$

$$\int e^x\mathrm{d}x = e^x + C \qquad\qquad \boxed{\int b^x\mathrm{d}x = \frac{b^x}{\ln b} + C}$$

$$\boxed{\int \sin x\mathrm{d}x = -\cos x + C} \qquad \boxed{\int \cos x\mathrm{d}x = \sin x + C}$$

$$\boxed{\int \sec^2 x\mathrm{d}x = \tan x + C} \qquad \int \csc^2 x\mathrm{d}x = -\cot x + C$$

$$\int \sec x \tan x\mathrm{d}x = \sec x + C \qquad \int \csc x \cot x\mathrm{d}x = -\csc x + C$$

$$\boxed{\int \frac{1}{1+x^2}\mathrm{d}x = \tan^{-1} x + C} \qquad \int \frac{1}{\sqrt{1-x^2}}\mathrm{d}x = \sin^{-1} x + C$$

$$\int \sinh x\mathrm{d}x = \cosh x + C \qquad \int \cosh x\mathrm{d}x = \sinh x + C$$