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Indefinite integrals

$$\int x^n \, dx = \frac{x^{n+1}}{n+1} + C \qquad \text{for } x \in \mathbb{R},\ n \in \mathbb{Z},\ n \geqslant 0$$

$$\int x^n \, dx = \frac{x^{n+1}}{n+1} + C \qquad \text{for } x \in \mathbb{R},\ x \neq 0,\ n \in \mathbb{Z},\ n \leqslant -2$$

$$\int x^s \, dx = \frac{x^{s+1}}{s+1} + C \qquad \text{for } x \in \mathbb{R},\ 0 < x,\ s \in \mathbb{R},\ s \neq -1$$

$$\int \frac{1}{x} \, dx = \ln|x| + C \qquad \text{for } x \in \mathbb{R},\ x \neq 0$$

$$\int e^x \, dx = e^x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \ln x \, dx = x \ln x - x + C \qquad \text{for } x \in \mathbb{R},\ 0 < x$$

$$\int \sin x \, dx = -\cos x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \cos x \, dx = \sin x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \tan x \, dx = -\ln|\cos x| + C \qquad \text{for } x \in \bigcup_{k \in \mathbb{Z}} \left(k\pi - \frac{\pi}{2},\, k\pi + \frac{\pi}{2} \right)$$

$$\int \frac{1}{\cos^2 x} \, dx = \tan x + C \qquad \text{for } x \in \bigcup_{k \in \mathbb{Z}} \left(k\pi - \frac{\pi}{2},\, k\pi + \frac{\pi}{2} \right)$$

$$\int \frac{1}{\sqrt{1-x^2}} \, dx = \arcsin x + C \qquad \text{for } x \in (-1, 1)$$

$$\int \frac{-1}{\sqrt{1-x^2}} \, dx = \arccos x + C \qquad \text{for } x \in (-1, 1)$$

$$\int \frac{1}{1+x^2} \, dx = \arctan x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \sinh x \, dx = \cosh x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \cosh x \, dx = \sinh x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \tanh x \, dx = \ln(\cosh x) + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \frac{1}{\cosh^2 x} \, dx = \tanh x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \frac{1}{\sqrt{1+x^2}} \, dx = \operatorname{arsinh} x + C \qquad \text{for } x \in \mathbb{R}$$

$$\int \frac{1}{\sqrt{x^2-1}} \, dx = \operatorname{arcosh} x + C \qquad \text{for } x \in \mathbb{R},\ 1 < x$$

$$\int \frac{1}{1-x^2} \, dx = \operatorname{artanh} x + C \qquad \text{for } x \in (-1,1)$$

$$\int \frac{1}{1-x^2} \, dx = \operatorname{artanh} \frac{1}{x} + C \qquad \text{for } x \in (-\infty,-1) \cup (1,\infty)$$

$$\int \frac{1}{1-x^2} \, dx = \frac{1}{2} \cdot \ln\left|\frac{x+1}{x-1}\right| + C \qquad \text{for } x \in (-\infty,-1) \cup (-1,1) \cup (1,\infty)$$

In this list C denotes a constant.