

Common Antiderivatives

1. Fixed Powers, $n \neq -1$

$$\int x^n \, dx = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1$$

2. Fixed Power, $n = -1$

$$\int \frac{1}{x} \, dx = \ln |x| + C$$

3. Exponentials

$$\int e^x \, dx = e^x + C, \quad \int e^{kx} \, dx = \frac{e^{kx}}{k} + C, \quad k \neq 0$$

4. Trigonometric Functions

$$\int \cos x \, dx = \sin x + C, \quad \int \cos(kx) \, dx = \frac{\sin(kx)}{k} + C, \quad k \neq 0$$

$$\int \sin x \, dx = -\cos x + C, \quad \int \sin(kx) \, dx = -\frac{\cos(kx)}{k} + C, \quad k \neq 0$$