FUNCTIONAL TUTORING

Common Integrals Chart

A printable common integrals chart focused on Calculus I antiderivatives, including the power rule, 1/x, e^x, basic trig integrals, constant multiples,

Power rule

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

Reciprocal

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

Natural exponential

$$\int e^x \, dx = e^x + C$$

Constant multiple

$$\int c\, f(x) \, dx = c \int f(x) \, dx$$

Sum / difference

$$\int [f(x) \pm g(x)] \, dx = \int f(x) \, dx \pm \int g(x) \, dx$$

Cosine

$$\int \cos x \, dx = \sin x + C$$

Sine

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

Secant squared

$$\int \sec^2 x \, dx = \tan x + C$$

Cosecant squared

$$\int \csc^2 x \, dx = -\cot x + C$$

Common Integrals Chart

01 Algebraic and exponential

These are the most common Calculus I patterns.

Power rule

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

Reciprocal

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

Natural exponential

$$\int e^x \, dx = e^x + C$$

Constant multiple

$$\int c\, f(x) \, dx = c \int f(x) \, dx$$

Common Integrals Chart

01 Algebraic and exponential (continued)

These are the most common Calculus I patterns.

Sum / difference

$$\int [f(x) \pm g(x)]\,dx = \int f(x)\,dx \pm \int g(x)\,dx$$

Common Integrals Chart

02 Basic trigonometric

Read each as the reverse of a derivative rule.

Cosine

$$\int \cos x \, dx = \sin x + C$$

Sine

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

Secant squared

$$\int \sec^2 x \, dx = \tan x + C$$

Cosecant squared

$$\int \csc^2 x \, dx = -\cot x + C$$

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HOW TO REMEMBER IT

Differentiate your answer to check it

1. For powers, add one to the exponent and divide by the new exponent.

2. The power rule excludes n=-1; 1/x integrates to ln|x|.

3. Every indefinite integral needs +C.