Fórmulas básicas a recordar

Integrales inmediatas

$$\int k \, dx = kx + C$$

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

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

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

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

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

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

$$\int \cos 2x \, dx = \frac{\sin 2x}{2} + C$$

$$\int \sin 2x \, dx = -\frac{\cos 2x}{2} + C$$

$$\int \frac{1}{\cos^2 x} \, dx = \tan x + C$$

$$\int \frac{1}{\sin^2 x} \, dx = -\cot x + C$$

$$\int \sec x \, dx = \ln |\sec x + \tan x| + C$$

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

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

$$\int \ln x \, dx = x \ln x - x + C$$

Integral por partes

$$\int u \, dv = uv - \int v \, du$$

Derivadas

$$(k)' = 0$$
$$(x^n)' = nx^{n-1}$$
$$(e^x)' = e^x$$
$$(\ln |x|)' = \frac{1}{x}$$
$$(a^x)' = a^x \ln a$$
$$(\sin x)' = \cos x$$

$$(\cos x)' = -\sin x$$
$$(\tan x)' = \sec^2 x$$
$$(\cot x)' = -\csc^2 x$$
$$(\sec x)' = \sec x \tan x$$
$$(\csc x)' = -\csc x \cot x$$
$$\left(\frac{1}{x}\right)' = -\frac{1}{x^2}$$