



TABLA DE INTEGRALES INMEDIATAS

Funciones Simples

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

$$\int \frac{1}{x} dx = \ln(x) + C$$

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

$$\int a^x dx = \frac{1}{\ln a} a^x + C \quad (a > 0)$$

$$\int \operatorname{sen} x dx = -\cos x + C$$

$$\int \cos x dx = \operatorname{sen} x + C$$

$$\int \frac{1}{\cos^2 x} dx = \int (1 + \operatorname{tg}^2 x) dx = \operatorname{tg} x + C$$

$$\int -\frac{1}{\operatorname{sen}^2 x} dx = \operatorname{cotg} x + C$$

$$\int \frac{1}{\sqrt{1-x^2}} dx = \operatorname{arc} \operatorname{sen} x + C$$

$$\int \frac{1}{1+x^2} dx = \operatorname{arc} \operatorname{tg} x + C$$

Funciones compuestas

$$\int f'(x) \cdot f(x)^n dx = \frac{1}{n+1} f(x)^{n+1} + C \quad n \neq -1$$

$$\int \frac{f'(x)}{f(x)} dx = \ln(f(x)) + C$$

$$\int f'(x) e^{f(x)} dx = e^{f(x)} + C$$

$$\int f'(x) a^{f(x)} dx = \frac{1}{\ln a} a^{f(x)} + C \quad (a > 0)$$

$$\int f'(x) \operatorname{sen}(f(x)) dx = -\cos(f(x)) + C$$

$$\int f'(x) \cos(f(x)) dx = \operatorname{sen}(f(x)) + C$$

$$\int \frac{f'(x)}{\cos^2(f(x))} dx = \int f'(x) (1 + \operatorname{tg}^2(f(x))) dx = \operatorname{tg}(f(x)) + C$$

$$\int -\frac{f'(x)}{\operatorname{sen}^2(f(x))} dx = \operatorname{cotg}(f(x)) + C$$

$$\int \frac{f'(x)}{\sqrt{1-(f(x))^2}} dx = \operatorname{arc} \operatorname{sen}(f(x)) + C$$

$$\int \frac{f'(x)}{1+(f(x))^2} dx = \operatorname{arc} \operatorname{tg}(f(x)) + C$$