TABLA DE INTEGRACIÓN

$$\int dx = x + C$$

$$\int a \cdot dx = ax + C$$

$$\int (u + v)\, dx = \int u dx + \int v dx$$

$$\int (u - v)\, dx = \int u dx - \int v dx$$

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

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

$$\int \frac{u'}{u} dx = \ln u + C$$

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

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

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

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

$$\int \frac{dx}{\cos^2 x} = \operatorname{tag} x + C$$

$$\int (1 + \operatorname{tag}^2 x)\, dx = \operatorname{tag} x + C$$

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

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

Saber de memoria la resolución de:

$$\int \operatorname{tag} x\, dx = \int \frac{\operatorname{sen} x}{\cos x} dx = \int \frac{-dt}{t} = -\ln t + C = -\ln \cos x + C$$ le hemos llamado cosx= t

$$\int \operatorname{tag}^2 x\, dx = \int (\operatorname{tag}^2 x + 1 - 1)\, dx = \int (\operatorname{tag}^2 x + 1)\, dx - \int 1\, dx = \operatorname{tag} x - x + C$$

$$\int e^{\frac{ax+b}{c}} dx = \frac{c}{a} e^{\frac{ax+b}{c}} + C$$ porque llamamos

$$\frac{ax + b}{c} = t \Rightarrow x = \frac{ct - b}{a} \Rightarrow dx = \frac{c}{a} dt$$ con lo que nos queda

$$\int e^{\frac{ax+b}{c}} dx = \int e^t \frac{c}{a} dt = \frac{c}{a} \int e^t dt = \frac{c}{a} e^t + C = \frac{c}{a} e^{\frac{ax+b}{c}} + C$$