

# CALCOLO di INTEGRALI

$$\int 3^x dx \quad \int 3^x e^x dx \quad \int (a + bx^3)^2 dx$$

$$\int \frac{dx}{x^9} \quad \int (nx)^{\frac{1-n}{n}} dx \quad \int \frac{dx}{(2x+3)^8}$$

$$\int \frac{dx}{x^2+7} \quad \int (\operatorname{tg} x)^2 dx \quad \int (\sqrt{x}+1)(x-\sqrt{x}) dx$$

$$\textcircled{*} \int \frac{dx}{\sqrt{x^2+1}} \quad \left[ \frac{1}{\sqrt{x^2+1}} = \frac{x+\sqrt{x^2+1}}{x+\sqrt{x^2+1}} \cdot \frac{1}{\sqrt{x^2+1}} = \frac{\frac{x}{\sqrt{x^2+1}} + 1}{\sqrt{x^2+1} + x} \right. \\ \left. = \frac{(\sqrt{x^2+1} + x)'}{\sqrt{x^2+1} + x} \dots \dots \right]$$

$$\int \frac{x}{\sqrt{x^2+1}} dx \quad \int \frac{\sqrt{x} + \ln x}{x} dx \quad \int \frac{x^2}{1+x^6} dx$$

$$\int \frac{dx}{x^2-1} \quad \int \frac{e^x}{e^x-1} dx \quad \int \frac{x}{x^2-5} dx$$

$$\int \frac{e^t}{1+e^{2t}} dt \quad \int \frac{\cos(\sqrt{x})}{\sqrt{x}} dx \quad \int \frac{\operatorname{sen} x}{\cos^4 x} dx$$

$$\int \frac{\operatorname{sen}(3x)}{2+\cos(3x)} dx \quad \int \frac{dx}{\operatorname{sen} x} \quad \int x \sqrt[5]{5-x^2} dx$$

$$\int \frac{\sqrt[3]{1+\ln x}}{x} dx \quad \int \frac{x dx}{\operatorname{sen}(x^2)} \quad \int \sqrt{e^x} dx$$

$$\int \frac{\operatorname{sen} x - \cos x}{\operatorname{sen} x + \cos x} dx \quad \int \frac{\sqrt{x^2+1}}{x^2} dx \quad [x = \operatorname{tg} t]$$

$$\int \frac{dx}{x \ln x} \quad [t = \ln x] \quad \int \frac{dx}{x(\ln x)^3} \quad \int \frac{\operatorname{sen}^3 t}{\sqrt{\cos t}} dt \quad \textcircled{\text{XXXX}}$$

$$\int \frac{dx}{x\sqrt{x^2-2}} \quad [x = \frac{1}{t}] \quad \int \frac{x dx}{\sqrt{x+4}} \quad [t = \sqrt{x+4}] \quad [x = \cos t]$$

$$\textcircled{P}: \int \frac{x}{e^x} dx \quad \int x \operatorname{sen} x \cos x dx \quad \int \frac{\ln x}{\sqrt{x}} dx \quad \int \operatorname{arctg} x dx$$

$$\textcircled{P}: \int x \cos(3x) dx \quad \int 3^x \cos x dx \quad \int e^x \cos x dx$$

$$\int e^{\sqrt{x}} dx \quad \int \frac{\cos x}{1+\operatorname{sen}^2 x} dx$$