Tabella integrali

$$\int f'(x)dx = f(x) + c$$

$$\int a\,dx = ax + c$$

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

$$\int \frac{1}{x} dx = \log|x| + c$$

$$\int \text{sen}x\,dx = -\cos x + c$$

$$\int \cos x\,dx = \text{sen}x + c$$

$$\int \left(1 + tg^2 x\right)dx = \int \frac{1}{\cos^2 x} dx = tgx + c$$

$$\int \left(1 + ctg^2 x\right)dx = \int \frac{1}{sen^2 x} dx = -ctgx + c$$

$$\int Sh\,x\,dx = Ch\,x + c$$

$$\int Ch\,x\,dx = Sh\,x + c$$

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

$$\int e^{kx}\,dx = \frac{e^{kx}}{k} + c$$

$$\int a^x\,dx = \frac{a^x}{\log_e a} + c$$

$$\int \frac{1}{senx} dx = \log\left|tg\frac{x}{2}\right| + c$$

$$\int \frac{1}{\cos x} dx = \log\left|tg\left(\frac{x}{2} + \frac{\pi}{4}\right)\right| + c$$

$$\int \frac{1}{\sqrt{1-x^2}}\,dx = \begin{cases} arcsen\ x + c \\ -\arccos x + c \end{cases}$$

$$\int \frac{-1}{\sqrt{1-x^2}}\,dx = \begin{cases} \arccos x + c \\ -arcsenx + c \end{cases}$$

$$\int \frac{1}{1+x^2}\,dx = arctg\ x + c$$

$$\int \frac{1}{1-x^2}\,dx = \frac{1}{2}\log\left|\frac{1+x}{1-x}\right| + c$$

$$\int \frac{1}{\sqrt{x^2-1}}\,dx = \log\left|x + \sqrt{x^2-1}\right| + c$$

$$\int \frac{1}{\sqrt{1+x^2}}\,dx = \begin{cases} arcsSh\ x + c \\ \log\left(x + \sqrt{1+x^2}\right) + c \end{cases}$$

$$\int \frac{1}{\sqrt{x^2 \pm a^2}}\,dx = 1\log\left|x + \sqrt{x^2 \pm a^2}\right| + c$$

$$\int \sqrt{x^2 \pm a^2}\,dx = \frac{x}{2}\sqrt{x^2 \pm a^2} \pm \frac{a^2}{2}\log\left(x + \sqrt{x^2 \pm a^2}\right) + c$$

$$\int \sqrt{a^2 - x^2}\,dx = \frac{1}{2}\left(a^2 arcsen\frac{x}{a} + x \cdot \sqrt{a^2 - x^2}\right) + c$$

$$\int sen^2 x\,dx = \frac{1}{2}(x - senx\cos x) + c$$

$$\int \cos^2 x\,dx = \frac{1}{2}(x + senx\cos x) + c$$

$$\int \frac{1}{Ch^2\,x}\,dx = \int (1 - Th^2 x)\,dx + c = Th\ x + c$$

$$\int f^n(x) f'(x)\,dx = \frac{f^{n+1}(x)}{n+1} + c$$

$$\int \frac{f'(x)}{f(x)}\,dx = \log|f(x)| + c$$

$$\int f'(x)\cos f(x)dx = sen\, f(x) + c$$

$$\int f'(x)\, sen\, f(x)dx = -\cos f(x) + c$$

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$$\int f'(x)\cos f(x)dx = sen\, f(x) + c$$

$$\int f'(x)\, sen\, f(x)dx = -\cos f(x) + c$$

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

$$\int a^{f(x)}f'(x)dx = \frac{a^{f(x)}}{\log_e a} + c$$

$$\int \frac{f'(x)}{\sqrt{1-f^2(x)}}dx = \begin{cases} arcsen\, f(x) + c \\ -\arccos f(x) + c \end{cases}$$

$$\int \frac{f'(x)}{1+f^2(x)}dx = arctg\, f(x) + c$$