TABELLA DELLE INTEGRAZIONI

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

$$\int x^{\alpha}\,dx = \frac{x^{\alpha+1}}{\alpha+1} + C \quad \text{con } \alpha \neq -1$$

$$\int \left[f(x)\right]^{\alpha} \cdot f'(x)\,dx = \frac{\left[f(x)\right]^{\alpha+1}}{\alpha+1} + C$$

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

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

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

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

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

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

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

$$\int \operatorname{sen}\left[f(x)\right] \cdot f'(x)\,dx = -\cos\left[f(x)\right] + C$$

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

$$\int \cos\left[f(x)\right] \cdot f'(x)\,dx = \operatorname{sen}\left[f(x)\right] + C$$

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

$$\int \frac{f'(x)}{1+\left[f(x)\right]^2}\,dx = \operatorname{arctg}\left[f(x)\right] + C$$

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

$$\int \frac{f'(x)}{\sqrt{1-\left[f(x)\right]^2}}\,dx = \operatorname{arcsen}\left[f(x)\right] + C = -\arccos\left[f(x)\right] + C$$