Principali sviluppi di Taylor-Maclaurin in $x_0 = 0$

Si ricorda che $n! = n(n-1)(n-2)\cdots 2 \cdot 1$.

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \cdots + \frac{x^n}{n!} + o(x^n)$$

$$\operatorname{sen} x = x - \frac{x^3}{3!} + \frac{x^5}{5!} + \cdots + (-1)^n \frac{x^{2n+1}}{(2n+1)!} + o(x^{2n+2})$$

$$\cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} + \cdots + (-1)^n \frac{x^{2n}}{(2n)!} + o(x^{2n+1})$$

$$\operatorname{tg} x = x + \frac{x^3}{3} + o(x^4)$$

$$\ln(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} + \cdots + (-1)^{n-1} \frac{x^n}{n} + o(x^n)$$

$$\operatorname{arcsen} x = x + \frac{x^3}{6} + o(x^4)$$

$$\operatorname{arctg} x = x - \frac{x^3}{3} + \frac{x^5}{5} + \cdots + (-1)^n \frac{x^{2n+1}}{2n+1} + o(x^{2n+2})$$

$$(1+x)^\alpha = 1 + \alpha x + o(x) \qquad (\alpha \in \mathbb{R})$$