

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!} + \dots \text{ за всяко } x \in (-\infty; +\infty);$$

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots + \frac{(-1)^n x^{2n+1}}{(2n+1)!} + \dots \text{ за всяко } x \in (-\infty; +\infty);$$

$$\cos x = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots + \frac{(-1)^n x^{2n}}{(2n)!} + \dots \text{ за всяко } x \in (-\infty; +\infty);$$

$$\frac{1}{1-x} = 1 + x + x^2 + x^3 + \dots + x^n + \dots \text{ за всяко } x \in (-1; +1);$$

$$\ln(1-x) = -x - \frac{x^2}{2} - \frac{x^3}{3} - \dots - \frac{x^n}{n} - \dots \text{ за всяко } x \in [-1; +1);$$

$$\ln(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} + \dots + \frac{(-1)^{n+1} x^n}{n} + \dots \text{ за всяко } x \in (-1; +1];$$

$$\operatorname{arctg} x = x - \frac{1}{3}x^3 + \frac{1}{5}x^5 - \frac{1}{7}x^7 + \dots = \sum_{k=1}^{\infty} (-1)^{k-1} \frac{x^{2k-1}}{2k-1}, \quad |x| \leq 1;$$

$$(1+x)^\mu = 1 + \binom{\mu}{1}x + \binom{\mu}{2}x^2 + \dots = \sum_{k=0}^{\infty} \binom{\mu}{k}x^k, \quad |x| < 1.$$