

Power Series: A power series is a series of the form

$$\sum_{n=0}^{\infty} c_n x^n = c_0 + c_1 x + c_2 x^2 + \dots + c_n x^n + \dots \text{ or}$$

$$\sum_{n=0}^{\infty} c_n (x-a)^n = c_0 + c_1 (x-a) + c_2 (x-a)^2 + \dots + c_n (x-a)^n + \dots \text{ in which the}$$

center a and the coefficients $c_0, c_1, c_2, \dots, c_n, \dots$ are constants. The set of all numbers x for which the power series converges is called the interval of convergence.