Abstract

An all new technique has been devised to solve non-linear Lane-Emden type equations. This novel technique is based on the Perturbation Iteration Algorithm. In this paper, a few examples are presented for the illustration of the power and wide usability of the proposed method. Moreover, a compare and contrast with the actual solution is provided. It has been evaluated that by employment of this method, the construction of perturbation solutions converging swiftly to the true solutions usually becomes easy, by giving us room to exactly demonstrate how $\varepsilon$-terms influence linearized equations. This swift convergence of the method gives solutions that are accurate quantitatively through relatively little iteration.

References


An Elegant Perturbation Iteration Algorithm for the Lane-Emden Equation


Index Terms

Computer Science

Algorithms

Keywords