Review of some iterative methods for solving nonlinear equations with multiple zeros

ABSTRACT

In this paper, some iterative methods with third order convergence for solving the nonlinear equation were reviewed and analyzed. The purpose is to find the best iteration schemes that have been formulated thus far. Hence, some numerical experiments and basin of attractions were performed and presented graphically. Based on the five test functions it was found that the best method is D87a due Dong's Family method (Int J Comput Math 21:363–367, 1987)

Keyword: Multi-point iterative methods; Multiple roots; Basin of attraction