

Basins of Attraction for Quartic-Order Methods

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Abstract : We compare optimal quartic order method for the multiple zeros of nonlinear equations illustrating the basins of attraction. To construct basins of attraction effectively, we take a 600×600 uniform grid points at the origin of the complex plane and paint the initial values on the basins of attraction with different colors according to the iteration number required for convergence.

Keywords : basins of attraction, convergence, multiple-root, nonlinear equation

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