A NEW FAMILY OF CHEBYSHEV-HALLEY LIKE METHODS FREE FROM SECOND DERIVATIVE

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Abstract. A new family of Chebyshev-Halley like methods free from second derivative for nonlinear equations is presented in this paper. The family is at least of third order convergence and includes one fourth order method as special case. It uses only two function evaluations and one first derivative evaluation per iteration. A general error analysis is given. Several numerical examples are given to illustrate the performance of the presented methods by comparing with some other methods.
Key Words and Phrases: Iterative method, nonlinear equation, Chebyshev-Halley method, convergence analysis, error equation.
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