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A CLASS OF NEWTON-LIKE METHODS WITH CUBIC CONVERGENCE FOR NONLINEAR EQUATIONS

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Abstract. In this paper, we present a new class of Newton-like methods for solving nonlinear equations, which deduces, as particular cases, some known results. It is proved that each method in the family is cubically convergent. A general error analysis is given, and the computational efficiency in term of function evaluations is provided. Several numerical examples are given to illustrate the performance of the presented methods by comparing with some other methods.
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