ON THE CONVERGENCE OF BROYDEN-LIKE METHODS FOR NONLINEAR EQUATIONS WITH NONDIFFERENTIABLE TERMS

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Abstract. In this paper, the author studies a Broyden-like method for solving nonlinear equations with nondifferentiable terms, which uses as updating matrices, approximations for Jacobian matrices of differentiable terms. Local and semilocal convergence theorems are proved. The results generalize those of Broyden, Dennis and Moré.

Key words and phrases: Convergence theorems, Broyden-like methods, nonlinear equations, nondifferentiable terms.