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A constructive iterative procedure for solving operator equations. (English. Russian original)

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Summary: An iterative procedure for solving operator equations of general form in Banach spaces by means of which the problem of solving a nonlinear equation reduces to solving equations with almost linear continuous operators, is described. For a wide class of equations in Hilbert space, a constructive iterative procedure which can be used to solve the initial problem is described and the conditions under which it converges to the exact solution are obtained.

MSC:

47J25 Iterative procedures involving nonlinear operators

Keywords:

iterative procedure; operator equations of general form in Banach spaces; equations with almost linear continuous operators; exact solution