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Continuous Parameter Dependence for Solutions and Green's Matrices of One-dimensional Linear Boundary-value Problems

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Sufficient conditions are found for the continuous dependence on parameter of the solutions of the most general linear boundary value problems for systems of first order linear differential equations in the Sobolev space $(W_1^1)^m$ norm which is stronger than uniform. Also sufficient conditions of convergence of Green's matrices of these problems in the L_∞ -norm on the square $[a, b] \times [a, b]$ are established. This allows to obtain sufficient conditions for the continuous dependence on parameter of the solutions of linear boundary value problems of arbitrary order $m \geq 2$ in the W_1^m -norm and corresponding Green's functions in the L_∞ -norm on the square $[a, b] \times [a, b]$.