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**A fresh look at linear ordinary differential equations with constant coefficients. Revisiting the impulsive response method using factorization.**

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Summary: We present an approach to the impulsive response method for solving linear constant-coefficient ordinary differential equations of any order based on the factorization of the differential operator. The approach is elementary, we only assume a basic knowledge of calculus and linear algebra. In particular, we avoid the use of distribution theory, as well as of the other more advanced approaches: Laplace transform, linear systems, the general theory of linear equations with variable coefficients and variation of parameters. The approach presented here can be used in a first course on differential equations for science and engineering majors.

*Classification:* I75

*Keywords:* ordinary differential equations; Green functions; instructional exposition

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