

## Closed Form Exact Solution for Second Order Linear Differential Equations

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**Abstract :** In a different simple and straight forward analysis a closed-form integral solution is found for nonhomogeneous second order linear ordinary differential equations, in terms of a particular solution of their corresponding homogeneous part. To find the particular solution of the homogeneous part, the equation is transformed into a simple Riccati equation from which the general solution of non-homogeneous second order differential equation, in the form of a closed integral equation is inferred. The method works well in many important cases, such as Schrödinger equation for hydrogen-like atoms. A non-homogeneous second order linear differential equation has been solved as an extra example

**Keywords :** explicit, linear, differential, closed form

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