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On Application of Elzaki Transform to Solve Integral Equations

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Abstract

An integral equation has mainly two types viz. Fredholm integral equation and Volterra integral equation. There are many methods available to solve these integral equations such as Laplace transform method, numerical methods successive iteration method etc.

A new transform **Elzaki Transform** have been introduced in 2011 by Elzaki which may be called an extension of Laplace transform and Sumudu transform. In Laplace transform, to solve differential equation, we need to change time domain into frequency domain and again back to the time domain by inverse Laplace transform whereas Elzaki transform solves the differential equation in the same domain. In this paper we have discussed and compared some of the properties of Laplace transform and Elzaki transform and their applications to solve some examples of integral equations.

Key Words: Elzaki transform, Laplace Transform, Integral equations etc