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**Sumudu transform and the solution of integral equations of convolution type.** (English)

Zbl 1008.45003

Int. J. Math. Educ. Sci. Technol. 32, No. 6, 906-910 (2001).

Summary: The convolution theorem for the Sumudu transform of a function which can be expressed as a polynomial or a convergent infinite series is proved and its applicability demonstrated in solving convolution type integral equations.

Reviewer: [Reviewer \(Berlin\)](#)

**MSC:**

[45E10](#) Integral equations of the convolution type (Abel, Picard, Toeplitz and Wiener-Hopf type)

Cited in **26** Documents

[44A35](#) Convolution as an integral transform

[44A10](#) Laplace transform

**Keywords:**

Laplace transformation; convolution; Sumudu transform; convolution type integral equations

**Full Text:** [DOI](#)

**References:**

- [1] MILES J. W., Integral Transforms in Applied Mathematics (1971) · [Zbl 0226.44001](#)
- [2] SNEDDON I. N., The Use of Integral Transform (1972) · [Zbl 0237.44001](#)
- [3] SPIEGEL M. R., Schaum's Outline of Theory and Problems of Advanced Calculus (1974)
- [4] STEPHENSON G., Mathematical Methods for Science Students (1973)
- [5] WATSON E. J., Laplace Transforms and Applications (1981) · [Zbl 0453.44007](#)
- [6] DOI: [10.1080/0020739930240105](https://doi.org/10.1080/0020739930240105) · [Zbl 0768.44003](#) · [doi:10.1080/0020739930240105](https://doi.org/10.1080/0020739930240105)
- [7] DOI: [10.1080/0020739940250214](https://doi.org/10.1080/0020739940250214) · [Zbl 0812.35004](#) · [doi:10.1080/0020739940250214](https://doi.org/10.1080/0020739940250214)

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