

BAILEY'S TRANSFORM AND KARLSSON–MINTON FORMULA

Chandan Kumar Singh, G. S. Pant* and Sunil Singh**

Department of Mathematics,
TDPG College, Jaunpur - 222002, Uttar Pradesh, INDIA

E-mail : chandansin25@gmail.com

*Department of Mathematics,
Siddhanath Science Campus, Mahendranagar Kanchanpur, NEPAL

E-mail : gspant2008@gmail.com

**Department of Mathematics,
Dr. Homi Bhabha State University,
The Institute of Science, Mumbai - 32, INDIA

E-mail : sunilsingh@iscm.ac.in

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Abstract: In this paper, making use of Bailey's transform and Karlsson-Minton summation formula, certain transformation formulas have been established. Interesting special cases have also been deduced.

Keywords and Phrases: Bailey's transform, Karlsson-Minton summation formula, basic hypergeometric series, q -binomial theorem, transformation formula.

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1. Introduction, Notations and Definitions

Throughout the paper we adopt the standard notations and terminology for q -series from [1] due to Gasper and Rahman. The q -shifted factorial for complex variable α with the base $q : |q| < 1$ are given below.

$$(\alpha; q)_{\infty} = \prod_{n=0}^{\infty} (1 - \alpha q^n)$$