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ON CERTAIN TRANSFORMATION FORMULAS INVOLVING q-HYPERGEOMETRIC SERIES

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Dedicated to Prof. K. Srinivasa Rao on his 75^{th} ***Birth Anniversary***

Abstract: In this paper transformations formulas involving q-hypergeometric series have been established. Certain identities have been deduced as special cases.

Keywords and Phrases: q-hypergeometric series, transformation formula, summation formula, identity.

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1. Introduction, Notations and Definitions

Throughout the paper, we use the customary notation,

$(a;q)_0 = 1$

$(a;q)_n = \prod_{r=0}^{n-1}(1-aq^r), \quad n \geq 1,$

$(a;q)_\infty = \lim_{n\to\infty}(a;q)_n, \quad |q| < 1$

and

$(a_1, a_2, a_3, ..., a_r; q)_n = (a_1;q)_n(a_2;q)_n(a_3;q)_n...(a_r;q)_n,$