

# POLYNOMIAL IDENTITIES INVOLVING RASCAL TRIANGLE

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ABSTRACT. Your abstract here.

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## 1. DEFINITIONS

**Definition 1.1.** *Generalized rascal number*

$$\binom{n}{k}_i = \sum_{m=0}^i \binom{n-k}{m} \binom{k}{m} \quad (1.1)$$

**Definition 1.2.**  *$(1, q)$ -Binomial coefficient*

$$\begin{bmatrix} n \\ k \end{bmatrix}^q = \begin{cases} q & \text{if } k = 0, n = 0 \\ 1 & \text{if } k = 0 \\ 0 & \text{if } k > n \\ \begin{bmatrix} n-1 \\ k \end{bmatrix}^q + \begin{bmatrix} n-1 \\ k-1 \end{bmatrix}^q & \text{if } 0 < k < n \end{cases} \quad (1.2)$$

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## 2. INTRODUCTION

## 3. CONCLUSIONS

Conclusions of your manuscript.

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