

**Zudilin, W.**

**On a combinatorial problem of Asmus Schmidt.** (English) Zbl 1126.11012  
Electron. J. Comb. 11, No. 1, Research paper R22, 8 p. (2004).

Summary: For any integer  $r \geq 2$ , define a sequence of numbers  $\{c_k^{(r)}\}_{k=0,1,\dots}$ , independent of the parameter  $n$ , by

$$\sum_{k=0}^n \binom{n}{k}^r \binom{n+k}{k}^r = \sum_{k=0}^n \binom{n}{k} \binom{n+k}{k} c_k^{(r)}, \quad n = 0, 1, 2, \dots$$

We prove that all the numbers  $c_k^{(r)}$  are integers.

**MSC:**

**11B65** Binomial coefficients; factorials;  $q$ -identities

**05A19** Combinatorial identities, bijective combinatorics

Cited in **3** Reviews  
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**Full Text:** [arXiv](#) [EuDML](#) [EMIS](#)