

DEFINITIONS

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ABSTRACT. Definitions

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- $T(n, k)$ recursively defines central factorial numbers of the second kind (in the context of Knuth and Riordan (see references)). It is defined in mathematica package as

`CentralFactorialNumber1`

$$\begin{cases} T(n, 1) &= 1 \\ T(n, n) &= 1 \\ T(n, k) &= T(n-1, k-1) + k^2 T(n-1, k) \end{cases}$$

- Identity in central factorial numbers defined as `CNFIdentity1` in mathematica package

$$(2k-1)!T(2n, 2k) = \frac{1}{k} \sum_{j=0}^k (-1)^j \binom{2k}{j} (k-j)^{2n}$$

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