
0863.05001

Chen, William Y.C.

The skew, relative, and classical derangements. (English)

Discrete Math. 160, No.1-3, 235-239 (1996). [ISSN 0012-365X]

<http://www.elsevier.com/locate/disc/>

A derangement on a set $[n] = \{1, \dots, n\}$ is a permutation $i_1 i_2 \dots i_n$, such that $i_k \neq k$ for each k . Their number is D_n . A relative derangement $j_1 j_2 \dots j_n$ is a permutation such that $j_k + 1 \neq j_{k+1}$ for each k . The number of these objects is Q_n . Brualdi showed that $Q_n = D_n + D_{n-1}$. The reviewed paper gives a bijective proof for this nice correspondence. The main tools are the so-called skew derangements, which are one-to-one maps $f : X \rightarrow Y$ (for $|X| = |Y|$) such that for every $x \in X$ the relation $f(x) \neq x$ holds.

*P.L.Erdős (Budapest)**Keywords* : derangement; permutation*Classification* :

*05A05 Combinatorial choice problems

05A15 Combinatorial enumeration problems

Cited in ...