

Title: The Cardinal of Various Monoids of Transformations That Preserve a Uniform Partition

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Abstract: In this paper we give formulas for the number of elements of the monoids $OR_m \times n$ of all full transformations on it finite chain with n elements that preserve it uniform m -partition and preserve or reverse the orientation and for its submonoids $OD_m \times n$ of all order-preserving or order-reversing elements, $OP_m \times n$ of all orientation-preserving elements, $O-m \times n$ of all order-preserving elements, $O-m \times n(+)$ of all extensive order-preserving elements and $O-m \times n(-)$ of all co-extensive order-preserving elements.

Author Keywords: Order-Preserving/Reversing; Orientation-Preserving/Reversing; Extensive; Equivalence-Preserving; Transformations.

KeyWords Plus: Finite Chain; Semidirect Products; Greens Relations; Semigroups; Order; Orientation; Mappings; Equivalence; Idempotent; Regularity

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