Geometric lattices and the connectivity of matroids of arbitrary cardinality [*]

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Abstract

Using geometric lattice theory, the concept of connectivity of a finite matroid is successfully generalized to that of a matroid of arbitrary cardinality. Afterwards, three criteria are presented for the connectivity of a matroid of arbitrary cardinality by the help of geometric lattice theory.

Key words geometric lattice; connectivity, matroid; arbitrary cardinality

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