

Edge-disjoint spanning trees, brick partitions, and body-and-pin frameworks

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Abstract

For each rational number $q \geq 1$, we describe two partitions of the vertex set of a graph G , called the q -brick partition and the q -superbrick partition. The special cases when $q = 1$ are the partitions given by the connected components and the 2-edge-connected components of G , respectively.

By using the structural properties of these partitions, we have proved a conjecture of T-S. Tay and W. Whiteley from 1984 on rigid two-dimensional body-and-pin frameworks.

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