

On 2-fold G -designs where G has order at most 4 and edge-multiplicity 2

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For a positive integer k , let 2K_k denote the 2-fold complete multigraph of order k . If G is a bipartite subgraph of 2K_4 , we find necessary and sufficient conditions for the existence of G -decompositions of 2K_n . We also report on some results when G is tripartite.

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