

The λ -fold spectra of several multigraphs on 4 vertices with 6 edges and edge multiplicity at most 2

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Let G be a multigraph on 4 vertices with 6 edges and edge multiplicity at most 2. Let ${}^\lambda K_n$ denote the complete λ -fold multigraph on n vertices. Necessary and sufficient conditions on n and λ for the existence of a G -decomposition of ${}^\lambda K_n$ are presented for several such multigraphs. This work was completed as part of the *Illinois State University REU for Pre-service and In-service Secondary Mathematics Teachers*.

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