

Primitive Star Decompositions of Complete Graphs

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A decomposition \mathcal{D} of a graph G is *primitive* if no proper, nontrivial subset of \mathcal{D} is a decomposition of an induced subgraph of G . The existence of primitive decompositions has been studied for path and cycle decompositions of complete and cocktail party graphs. This work addresses the existence of primitive m -star decompositions in complete graphs with n vertices. We specifically focus on cases with even m , where $2m \leq n \leq 4m$.