

Encoding Acyclic Orientation of Complete Multipartite Graphs

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In this work we study the acyclic orientations of complete multipartite graphs. We define an encoding which allows us to enumerate the number of non-isomorphic acyclic orientations and then we provide closed formulas for obtaining this number for complete multipartite graphs when the vertices are labeled, or unlabeled. We also give a recursive way to construct all acyclic orientations, which can be done by computer easily in order $\mathcal{O}(n)$.

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