

Finding Balance: Split Graphs and Related Classes

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A graph is a split graph if its vertex set can be partitioned into a clique and an independent set. A split graph is unbalanced if there exist two such partitions that are distinct. Cheng, Collins and Trenk (2016), discovered the following interesting counting fact: unlabeled, unbalanced split graphs on n vertices can be placed into a bijection with all unlabeled split graphs on $n - 1$ or fewer vertices. In this paper we translate these concepts and the theorem to different combinatorial settings.

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