

Linear coloring of graphs

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Abstract

A proper vertex coloring of a graph G is linear if the graph induced by the vertices of any two color classes is the union of vertex-disjoint paths. The linear chromatic number $lc(G)$ of G is the smallest number of colors in a linear coloring of G . In this talk, we study the linear coloring of some special graphs such as general planar graphs, planar graphs without cycles of specific lengths, graphs embeddable in surfaces of nonnegative Euler characteristic and without some small cycles, graphs with the maximum degree 4 or 5, etc.