Colored problems for graphs

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Abstract

We consider problems in which the vertex and/or edge set is partitioned into color classes. The solution set is required to contain either all or none of the elements in each color class. Problems of this type include finding a longest cycle, an independent set, or a dominating set. We primarily consider the "coupled domination" problem in which the vertex set is partitioned into subsets of order at most two.

KEYWORDS: coupled domination, colorings