

Operations Research: theory and applications to networking

Graph coloring revisited

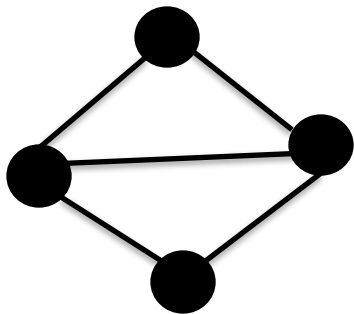
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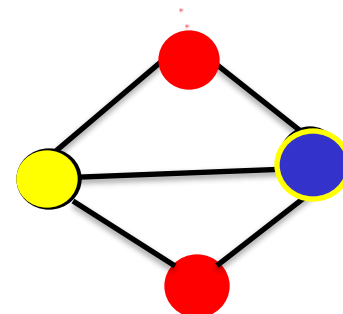
Graph Coloring problem

Given an undirected graph, assign colors (from a palette) to nodes so that: different colors are assigned to adjacent nodes.

The goal is to minimize the number of used colors.



Formulate the problem!



Graph coloring

As for graph coloring consider graphs with $N = 20, 40, 60$, in which for every pair of nodes (i,j) , an undirected edge (i,j) is added to the graph with probability p , independently from other edges.

For $p = 0.1, 0.3, 0.5$ generate three/four instances and solve the GC problem on them.