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Note

FRACTIONAL ASPECTS OF THE ERDŐS-FABER-LOVÁSZ CONJECTURE

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Abstract

The Erdős-Faber-Lovász conjecture is the statement that every graph that is the union of n cliques of size n intersecting pairwise in at most one vertex has chromatic number n. Kahn and Seymour proved a fractional version of this conjecture, where the chromatic number is replaced by the fractional chromatic number. In this note we investigate similar fractional relaxations of the Erdős-Faber-Lovász conjecture, involving variations of the fractional chromatic number. We exhibit some relaxations that can be proved in the spirit of the Kahn-Seymour result, and others that are equivalent to the original conjecture.

Keywords: Erdős-Faber-Lovász Conjecture, fractional chromatic number.

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