Kempe recoloring version of Hadwiger's conjecture

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Kempe chain (1879)

Maximal bichromatic connected component in G



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Reconfiguration graph

- $V(R^k(G)) = k$ -colorings of G.
- α and β adjacent if $\alpha \longleftrightarrow_{\mathsf{Kempe}} \beta$

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Meyniel's lemma

Meyniel 1978

- All 5-colorings of a planar graph are Kempe equivalent
- False for 4-colorings:



