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Graphs with maximum degree 5 are acyclically 7-colorable

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Abstract

An acyclic coloring is a proper coloring with the additional property that the union of any two color classes induces a forest. We show that every graph with maximum degree at most 5 has an acyclic 7-coloring. We also show that every graph with maximum degree at most r has an acyclic $(1 + \lfloor (r+1)2/4 \rfloor)$-coloring.

Keywords: Acyclic coloring, maximum degree.

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Grafi z maksimalno stopnjo 5 so aciklično 7-obarvljivi

Povzetek

Aciklično barvanje je pravilno barvanje vozlišč grafa z dodatno lastnostjo, da unija katerihkoli dveh barvnih razredov inducira gozd. Pokažemo, da ima vsak graf z maksimalno stopnjo največ 5 aciklično 7-barvanje. Pokažemo tudi, da ima vsak graf z maksimalno stopnjo največ r aciklično $(1 + \lfloor(r + 1)2/4\rfloor)$-barvanje.

Ključne besede: Aciklično barvanje, maksimalna stopnja.