

Zhao, Yongqiang; He, Wenjie; Shen, Yufa; Wang, Yanning

Note on characterization of uniquely 3-list colorable complete multipartite graphs. (English)

Zbl 1149.05312

Akiyama, Jin (ed.) et al., Discrete geometry, combinatorics and graph theory. 7th China-Japan conference, CJCDGCGT 2005, Tianjin, China, November 18–20, 2005, Xi'an, China, November 22–24, 2005. Revised selected papers. Berlin: Springer (ISBN 978-3-540-70665-6/pbk). Lecture Notes in Computer Science 4381, 278-287 (2007).

Summary: Let G be a graph and suppose that for each vertex v of G , there exists a list of k colors, $L(v)$, such that there is a unique proper coloring for G from this collection of lists, then G is called a uniquely k -list colorable graph. M. Ghebleh and E. S. Mahmoodian characterized uniquely 3-list colorable complete multipartite graphs except for nine graphs. Recently, except for graph $K_{2,3,4}$, the other eight graphs were shown not to be uniquely 3-list colorable by W. He and Y. Shen, etc. In this paper, it is proved that $K_{2,3,4}$ is not uniquely 3-list colorable, and then the uniquely 3-list colorable complete multipartite graphs are characterized completely.

For the entire collection see [Zbl 1115.68001].

MSC:

05C15 Coloring of graphs and hypergraphs

Cited in 2 Documents

Full Text: [DOI](#)