

**REDUCTION OF THE GRAPH ISOMORPHISM PROBLEM TO CHECKING
THE EQUALITY OF POLYNOMIALS OF N VARIABLES**

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A. V. Prolubnikov

It is proved that two graphs are isomorphic if there exists an enumeration for vertices of one of the graphs such that modified characteristic polynomials of the graphs are equal. An algorithm for solving the graph isomorphism problem is presented. The algorithm finds an enumeration for vertices of one of the graphs that provides the equality of coefficients of the polynomials if such an enumeration exists.

Keywords: graph isomorphism, complete invariant.

A. V. Prolubnikov, Cand. Sci. (Phys.-Math.), associate Professor, Omsk State University, Omsk, 644077 Russia e-mail: a.v.prolubnikov@mail.ru.

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