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THE P_0-MATRIX COMPLETION PROBLEM*

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Abstract. In this paper the P_0-matrix completion problem is considered. It is established that every asymmetric partial P_0-matrix has P_0-completion. All 4×4 patterns that include all diagonal positions are classified as either having P_0-completion or not having P_0-completion. It is shown that any positionally symmetric pattern whose graph is an n-cycle with $n \geq 5$ has P_0-completion.

Key words. Matrix completion, P_0-matrix, P-matrix, digraph, n-cycle, asymmetric.

AMS subject classifications. 15A48

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