Matrix completion problem

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Abstract

A real n ・ n matrix is a nonnegative P0-matrix if its principal minors are nonnegative and all its entriesare nonnegative. A digraph D is said to have nonnegative P0-matrix completion if every partial nonnegative P0-matrix specifying D can be completed to a nonnegative P0- matrix.In this paper we study nonnegative P0-matrix completion for p=6 vertices with q=6 directed arcs where sufficient conditions fora digraph to have nonnegative P0 completion are given and necessary conditions for a digraph to have nonnegative P0-completion are provided.