

Unitary similarity of algebras generated by pairs of orthoprojectors

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Abstract

It is shown that the unitary similarity of two matrix algebras generated by pairs of orthoprojectors $\{P_1, Q_1\}$ and $\{P_2, Q_2\}$ can be verified by comparing the traces of P_1, Q_1 , and $(P_1Q_1)^i$, $i = 1, 2, n$, with those of P_2, Q_2 , and $(P_2Q_2)^i$. The conditions of the unitary similarity of two matrices with quadratic minimal polynomials presented in [A. George and Kh. D. Ikramov, Unitary similarity of matrices with quadratic minimal polynomials, *Linear Algebra Appl.*, 349, 11-16 (2002)] are refined. Bibliography: 10 titles. © 2006 Springer Science+Business Media, Inc.

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