

The matrix equation $AX-YB=C$ and related problems

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Abstract

The main result of the paper is a theorem, using which a new proof of Roth's theorem is obtained, a new solvability criterion for the matrix equation $AX-YB = C$ is proved, a formula for a particular solution of the latter is derived, and the least of the orders of square nonsingular matrices containing a given rectangular matrix as a submatrix is determined. Bibliography: 5 titles. © 2006 Springer Science+Business Media, Inc.

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