

SOME RESULTS ON GROUP INVERSES OF BLOCK MATRICES OVER SKEW FIELDS*

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Abstract. In this paper, necessary and sufficient conditions are given for the existence of the group inverse of the block matrix $\begin{pmatrix} A & A \\ B & 0 \end{pmatrix}$ over any skew field, where A, B are both square and $\text{rank}(B) \geq \text{rank}(A)$. The representation of this group inverse and some relative additive results are also given.

Key words. Skew, Block matrix, Group inverse.

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