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Title: On the Banach algebra $(w_\infty(\Lambda), w_\infty(\Lambda))$ and applications to the solvability of matrix equations in $w_\infty(\Lambda)$

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We apply the characterisation of the class $(w_\infty(\Lambda), w_\infty(\Sigma))$ and the fact that this is a Banach algebra to study the solvability in $w_\infty(\Lambda)$ of matrix equations of the form $\Delta_\rho^+ X = B$ and $\Delta_\rho X = B$, where Δ_ρ^+ and Δ_ρ are upper and lower triangular matrices. Finally, we obtain some results on infinite tridiagonal matrices considered as operators from $w_\infty(\Lambda)$ into itself, and study the solvability in $w_\infty(\Lambda)$ of matrix equations for tridiagonal matrices.

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