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THE DUAL SPACES OF SETS OF DIFFERENCE SEQUENCES OF ORDER m AND MATRIX TRANSFORMATIONS

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摘要

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Abstract Let $p=(p_{ k})_{k=0}^{\infty}$ be a bounded sequence of positive reals, $m\in{\Bbb N}$ and u be s sequence of nonzero terms. If $x=(x_{k})_{k=0}^{\infty}$ is any sequence of complex numbers we write $\Delta^{(m)} x$ for the sequence of the m--th order differences of x and ${\Delta^{(m)}}_{u}X=\{x=(x)_{k=0}^ {\infty}:u\Delta ^{(m)}x\in X\}$ for any set X of sequences. We determine the α-, β- and γ-duals of the sets ${\Delta^{(m)}}_{u}X$ for $X={c_{0}(p)},{c(p)},{\ell_{\infty}(p)}$ and characterize some matrix transformations between these spaces ${\Delta^{(m)} X}$.

Key words difference sequences dual spaces matrix transformations

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