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MATRIX TRANSFORMATIONS AND SEQUENCE SPACES EQUATIONS

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ABSTRACT. In this paper we study sequence spaces equations (SSE) with operators, which are determined by an identity whose each term is a sum or a sum of products of sets of the form $\chi_a(T)$ and $\chi_{f(x)}(T)$ where f maps U^+ to itself, χ is either of the symbols s , s^0 , or $s^{(c)}$. Then we solve five (SSE) of the form $\chi_a + \chi'_x = \chi'_b$, where χ, χ' are either s^0 , $s^{(c)}$, or s . We apply the previous results to the solvability of the systems $s_a^0 + s_x(\Delta) = s_b$, $s_x \supset s_b$ and $s_a + s_x^{(c)}(\Delta) = s_b^{(c)}$, $s_x^{(c)} \supset s_b^{(c)}$. Finally we solve the (SSE) with operators defined by $\chi_a(C(\lambda)D_\tau) + s_x^{(c)}(C(\mu)D_\tau) = s_b^{(c)}$ where χ is either s^0 , or s .

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