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Some rotational automorphisms of Mendelsohn triple and quadruple systems. (English summary)

Utilitas Math. **47** (1995), 117–127.

Summary: "A Mendelsohn design of order v with block size n is said to be k-rotational if it admits an automorphism consisting of a fixed point and k cycles each of length $(v-1)/k$. It is said to be k-near-rotational if it admits an automorphism consisting of w fixed points and k cycles each of length $(v-w)/k$ where w is the order of the smallest nontrivial Mendelsohn design with block size n. A Mendelsohn triple system is k-transrotational if it admits an automorphism consisting of a fixed point, a transposition and k cycles each of length $(v-3)/k$. The question of existence is addressed for k-transrotational and k-near-rotational Mendelsohn triple systems and for k-rotational and k-near-rotational Mendelsohn quadruple systems."