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On Combinatorial Problem, Related with Fast Matrix Multiplication

Yu. V. Kuznetsov

Scientific Research Institute for System Studies of RAS, Russia, 117218, Moscow, Nakhimovskii pr., k. 1, 36, ykuz@niisi.ras.ru

The group-theoretical approach to fast matrix multiplication generates specific combinatorial objects, named Uniquely Solvable Puzzles (briefly USP). In the paper some numerical characteristic of the USP was discussed and the relation of USPs to famous combinatorial problem named «Cap set problem» was investigated.

Key words: fast matrix multiplication, group-theoretical approach to fast matrix multiplication, USP, Cap set problem.

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