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ON THE GAPS IN THE SET OF EXPONENTS OF BOOLEAN PRIMITIVE CIRCULANT MATRICES[*]

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Abstract. In this paper, we consider the problem of describing the possible exponents of boolean primitive circulant matrices. We give a conjecture for the possible such exponents and prove this conjecture in several cases. In particular, we consider in greater detail the case of matrices whose generating vector has three nonzero entries.

Key words. Circulant primitive matrices, Exponent of primitive matrices, Circulant digraphs, Basis for a group.

AMS subject classifications. 11P70, 05C25, 05C50.