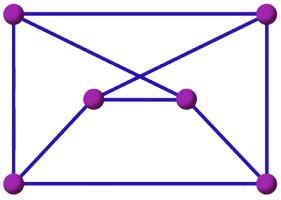

SEMINARIUM
MATEMATYKA DYSKRETNA

wtorek, 11 marca 2025 r., godz. 12:30, s. 612 C7

Magic squares in finite Abelian groups

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Let $(\Gamma, +)$ be an Abelian group of order n^2 and $\mathrm{MS}_\Gamma(n)$ be an $n \times n$ array whose entries are all elements of Γ. Then $\mathrm{MS}_\Gamma(n)$ is a Γ-magic square if all row, column, main and backward main diagonal sums are equal to the same element $\mu \in \Gamma$. We show that for every Abelian group Γ of order n^2, $n > 2$, there exists a magic square $\mathrm{MS}_\Gamma(n)$ where the square entries are elements of Γ.