Tutorials 8

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1 Exercise

Let $\mathbb{T}$ denote the unit circle, and $\lambda \in \mathbb{T}$ be an algebraic number that is not a root of unity. Prove that the sequece $(\lambda^n)_{n \in \mathbb{N}}$ is dense in $\mathbb{T}$.

2 Exercise

Let $u_n = \sum_{i=1}^{d} a_i u_{n-i}$ be a LRS over $\mathbb{Z}$ with finitely many zeros. Give a bound on the number of zeros of $u_{n \in \mathbb{N}}$ in terms of its coefficients $a_1, \ldots, a_d$.