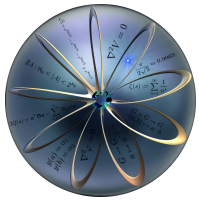

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determinant condition for a sequence of vectors

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Let $x_1, x_2, ...$ be a sequence of d dimensional vectors. Assume that there is a function $C\colon \mathbb{N}^d \to \mathbb{R} \setminus \{0\}$ such that

$$\sum_{\substack{n_1+\cdots+n_d=n \\ 0<n_1<\cdots<n_d}} C(n_1, ..., n_d) \det[x_{n_1}, x_{n_2}, ..., x_{n_d}] = 0$$

for every $n \in \mathbb{N}$. Then the sequence is contained within a proper linear subspace.