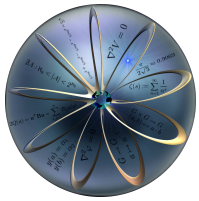

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equivalent condition for the translates of an L_2 function to form a Riesz sequence, an

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Theorem 1 *Let $\phi \in L_2(\mathbb{R})$, $\phi_k(x) = \phi(x-k)$ and $\hat{\phi}$ be the Fourier transform of ϕ. Let A and B be positive constants. Then the following are equivalent:*

(i) $\forall c(k) \in l_2, \quad A \|c\|_{l_2}^2 \leq \left\| \sum_{k\in\mathbb{Z}} c(k)\phi_k \right\|^2 \leq B \|c\|_{l_2}^2$

(ii) $A \leq \sum_{k\in\mathbb{Z}} \left| \hat{\phi}(\omega + 2\pi k) \right|^2 \leq B$

The first of the above conditions is the definition for $\{\phi_k\}_{k\in\mathbb{Z}}$ to form a Riesz sequence.