

A note about the discrete Riesz potential on $\mathbb{Z}^n$

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Abstract. In this note, we prove that the discrete Riesz potential I_α defined on $\mathbb{Z}^n$ is a bounded operator $H^p(\mathbb{Z}^n) \rightarrow \ell^q(\mathbb{Z}^n)$ for $0 < p \leq 1$ and $\frac{1}{q} = \frac{1}{p} - \frac{\alpha}{n}$, where $0 < \alpha < n$.

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