NORMS OF POSITIVE OPERATORS ON $L^p$-SPACES

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Abstract

Let $0 \leq T : L^p(Y, \nu) \to L^q(X, \mu)$ be a positive linear operator and let $\|T\|_{p,q}$ denote its operator norm. In this paper a method is given to compute $\|T\|_{p,q}$ exactly or to bound $\|T\|_{p,q}$ from above. As an application the exact norm $\|V\|_{p,q}$ of the Volterra operator $V f(x) = \int_0^x f(t)dt$ is computed.

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