



REFINEMENTS AND REVERSES OF MEANS INEQUALITIES FOR HILBERT SPACE OPERATORS

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ABSTRACT. In this paper we derive some improvements of means inequalities for Hilbert space operators. More precisely, we obtain refinements and reverses of the arithmetic-geometric operator mean inequality. As an application, we also deduce an improved variant for the refined arithmetic-Heinz mean inequality. We also present some eigenvalue inequalities for differences of certain operator means.

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