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MONOTONICITY OF WEIGHTED AVERAGES OF CONVEX FUNCTIONS

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Abstract. We consider weighted averages of the form $B_n(W,f)=\sum_{r=0}^{n} w_{n,r} f(r/n)$, where W is a summability matrix and f is convex. Conditions are given for $B_n(W,f)$ to increase or decrease with n. It decreases whenever W is a Hausdorff mean. The sequence of Bernstein polynomials for a convex function is a special case.

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