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Grahame Bennett* (bennettg@indiana.edu), Department of Mathematics, Rawles Hall,
Indiana University, Bloomington, IN 47405. *Hausdorff Means and Inequalities*. Preliminary report.

Hausdorff means are shown to play a useful role in the General Theory of Inequalities. Several examples will be discussed, the following being fairly typical. THEOREM: The arithmetic means of a log-convex sequence form again a log-convex sequence. This elegant assertion, due to Oseki, is surprisingly difficult to prove directly. The arithmetic means, however, may be replaced by arbitrary Hausdorff means and the resulting proof, based on an idea of Davenport and Polya, is then every bit as elegant as the original assertion. (Received August 02, 2007)