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EXTREME POINTS FOR REGULAR SUMMABILITY MATRICES*

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1. In this paper we shall be studying bounded sequences summed by a regular matrix. The usual norm for the space of bounded sequences is $\|s_n\| = \sup|s_n|$ and the *unit ball* is the set of sequences with $\|s_n\| \leqq 1$. If A is a regular matrix, then $\mathfrak{A}$ denotes the set of bounded sequences summed by A, $\mathfrak{A}$ is called the *summability field* of A. If $\{s_n\}$ is summed by A, A-lim s_n denotes the value to which it is summed.

The following result is due to Brudno, see [4] and [2].

THEOREM 1. *If* $\mathfrak{A} \supset \mathfrak{B}$, *then* $A-\lim s_n = B-\lim s_n$ *for every* $\{s_n\} \in \mathfrak{B}$.

By the *summability method* $\mathfrak{U}$, we denote the set of all matrices which have $\mathfrak{A}$ as their summability field. Let A be a regular matrix, $h(A)$ is called the *matrix norm* of A, where

$$h(A) = \sup_m \sum_{n=1}^{\infty} |a_{m,n}| < \infty$$

It is clear that

$$1 \leqq \sup|A-\lim s_n| \leqq h(A)$$

where the sup is taken over all bounded sequences in the unit ball summed by A. The value of $\sup|A-\lim s_n|$ is a function of the summability field and we define the *field norm* $N(\mathfrak{A})$ by

$$N(\mathfrak{A}) = \sup|A-\lim s_n|$$

where the sup is taken over the unit ball. We can also consider,

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