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SEVERAL THEOREMS ON λ-SUMMABLE SERIES

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G. H. Hardy [1] proved: necessary and sufficient condition that the series

$$\sum_{k=0}^{\infty} a_k \tag{1}$$

should be summable $(C, 1)$ to sum A is that

$$\xi_n + (n+1)b_{n+1} \to A, \tag{2}$$

where

$$\xi_n = \sum_{k=0}^{n} a_k \tag{3}$$

and

$$b_n = \sum_{k=n}^{\infty} \frac{a_k}{k+1}. \tag{4}$$

We consider here some problems of rapidity at Hardy's result.

REFERENCES

[1] G. H. Hardy. A theorem concerning summable series. Proc. Cambridge Philos. Soc. **20**, 34-37, 1920-21.

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[3] F. Móricz, B. E. Rhoades. An equivalent reformation of summability by weighted mean methods, revisited. Linear algebra Appl. **349**, 187-192, 2002.