

Cabral, Emmanuel; Lee, Peng-Yee

The primitive of a Kurzweil-Henstock integrable function in multidimensional space. (English) Zbl 1069.26013

Real Anal. Exch. 27(2001-2002), No. 2, 627-634 (2002).

Additive interval functions F defined on subintervals of a given m -dimensional interval E which are the Kurzweil-Henstock primitives to some $f : E \rightarrow \mathbb{R}$ are fully characterized in the paper. The authors use derivatives of F and they overcome the problem that Kurzweil-Henstock integrable functions are not absolutely integrable. Also the concept of inner variation is used for one of the characterization of the primitives. It is mentioned at the end of the paper that the methods can be used also for the absolutely convergent McShane integral.

Reviewer: Štefan Schwabik (Praha)

MSC:

26B99 Functions of several variables

26A39 Denjoy and Perron integrals, other special integrals

Cited in **1** Document

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Kurzweil-Henstock integral; primitive; McShane integral

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