MR2202919 (Review) 26A42 26A24 26A39
Hagood, John W. (1-NAZ-MS); **Thomson, Brian S.** (3-SFR)
Recovering a function from a Dini derivative.
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The inversion formula

$$F(b) - F(a) = \int_a^b D^+ F(x)\, dx$$

for a function F having finite upper right-hand Dini derivative $D^+ F(x)$ at each $x \in \mathbb{R}$ is discussed. The authors seek a suitable Riemann-type definition of the integral to obtain this formula without an integrability assumption for $D^+ F$. To this purpose, the notion of so-called right full cover (a special case of covering relation due to the second author [B. S. Thomson, Mem. Amer. Math. Soc. **93** (1991), no. 452, vi+96 pp.; MR1078198 (92d:26002)]) is introduced. The inversion formula is established for any continuous F, with the integral being understood as the lower (Henstock-Kurzweil-type) integral defined with respect to right full covers. Clearly, an analogous result holds for any of the remaining three Dini derivatives $D_+ F$, $D^- F$, $D_- F$.

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[**References**]

Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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