

**Kalajda, O. F.; Melnychuk, D. V.**

**On some generalization of Frullani and Dirichlet formulas.** (Ukrainian) Zbl 0924.26002  
Visn., Ser. Fiz.-Mat. Nauky, Kyïv. Univ. Im. Tarasa Shevchenka 1997, No. 1, 57-59 (1997).

The authors give formulas for the calculation of the following integrals depending on parameters:  $I_u(\alpha, \beta) = \int_a^b [f(\alpha u(x)) - f(\beta u(x))] / v(x) dx$  and  $D_u(\beta) = \int_a^b \sin(\beta u(x)) / v(x) dx$ , where  $f$  is a continuous function;  $u$  is a monotonic continuously-differentiable function;  $u(a) = 0$ ,  $\lim_{x \rightarrow b} u(x) = +\infty$ ,  $v(x)u'(x) = \gamma u(x)$ ,  $\gamma = \text{const}$ .

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**MSC:**

**26A06** One-variable calculus  
**26A48** Monotonic functions, generalizations

**Keywords:**

generalization; Frullani formula; Dirichlet formula