

Frappier, C.; Rahman, Q. I.

Une formule de quadrature pour les fonctions entières de type exponentiel. (A quadrature formula for entire functions of exponential type). (French) [Zbl 0589.30024](#)

Ann. Sci. Math. Qué. 10, 17-26 (1986).

If $0 < \sigma < \infty$ and f is an entire function of exponential type $< 2\sigma$, or of type 2σ and $f(x) = O(\exp(|x|^{-\delta}))$, $\delta > 1$, then

$$\int_{-\infty}^{\infty} f(x) dx = \pi \sigma^{-1} \sum_{-\infty}^{\infty} f(n\pi/\sigma).$$

These results could be deduced from the Poisson summation formula, but the authors' proof is based on *L. Hörmander's* approximation method [*Math. Scand.* 3, 21-27 (1955; [Zbl 0065.303](#))].

Reviewer: [R.P.Boas](#)

MSC:

[30D20](#) Entire functions of one complex variable, general theory

[65D30](#) Numerical integration

[65B15](#) Euler-Maclaurin formula in numerical analysis

Cited in **1** Review
Cited in **8** Documents

Keywords:

entire function of exponential type; Poisson summation formula