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## Extension of relations for entire functions of exponential type to wider classes

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There are various relations (formulae and inequalities) that hold for entire functions of exponential type  $\sigma$ , say, but are no longer valid outside this class. However, when a function  $f$  is in some sense close to an entire function of exponential type  $\sigma$ , one may expect that the corresponding relation is not violated drastically. It should hold with an error that involves the deviation of  $f$  from an entire function of exponential type  $\sigma$ .

We establish extensions of this kind. Our considerations include the classical sampling formula by Whittaker-Kotel'nikov-Shannon, the trapezoidal rule on  $\mathbb{R}$ , the reproducing kernel formula, Boas' differentiation formula, Bernstein's inequality for derivatives and Nikolskii's inequality estimating the  $l^2(\mathbb{Z})$  norm in terms of the  $L^2(\mathbb{R})$  norm.

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