

CONVERGENCE OF CUBATURE FORMULAS OF HIGH TRIGONOMETRIC PRECISION IN MULTIDIMENSIONAL PERIODIC SOBOLEV SPACES

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We establish convergence in a norm of cubature formulas of high trigonometric precision on multidimensional periodic Sobolev spaces including spaces of fractional smoothness. The main result is obtained under the conventional conditions on smoothness of the space of integrands and distribution of the nodes of the cubature formulas.

Key words and phrases: cubature formula, formula of high trigonometric precision, error function, periodic Sobolev space, embedding functions and constants.

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