

# Local bases for generalized cubic splines

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**Abstract** - Direct and recursive algorithms are proposed for constructing generalized cubic B-splines. Explicit formulae are obtained for generalized B-splines. Properties of series consisting of B-splines are studied. It is shown that generalized B-splines form weak Chebyshev systems. The presented formulae of local approximation are exact for polynomials of the first degree. Examples of generalized B-splines including those with alternating signs are considered.

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