



TWO-DIMENSIONAL CHEBYSHEV-LIKE POLYNOMIALS

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Abstract

In [T. Takebayashi, Chebyshev-like polynomials and Gegenbauer polynomials, Pioneer J. Math. Math. Sci. 26(1) (2019), 29-34], we defined Chebyshev-like polynomials. In this paper, we define two-dimensional Chebyshev-like polynomials $d_{m,n}^{(j)}(x, y; \tau)$ and $D_{m,n}^{(j)}(x, y; z, w | \tau)$ according to the method [G. Dattoli, P. E. Ricci and C. Cesarano, A note on multi-index polynomials of Dickson type and their applications in quantum optics, J. Comput. Appl. Math. 145(2) (2002), 417-424], [G. Dattoli, H. M. Srivastava and K. Zhukovsky, Orthogonality properties of the Hermite and related polynomials, J. Comput. Appl. Math. 182(1) (2005), 165-172].

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