

Recurrence Relations for Strongly q -Log-Convex Polynomials

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Abstract: We consider a class of strongly q -log-convex polynomials based on a triangular recurrence relation with linear coefficients, and we show that the Bell polynomials, the Bessel polynomials, the Ramanujan polynomials and the Dowling polynomials are strongly q -log-convex. We also prove that the Bessel transformation preserves log-convexity.

AMS Classification: 05A20, 05E99

Keywords: log-concave, q -log-convexity, strong q -log-convexity, Bell polynomials, Bessel polynomials, Ramanujan polynomials, Dowling polynomials

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