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Finite Family of q-Orthogonal Polynomials.

For q > 1 the continuous q-Jacobi polynomials form a finite family of polynomials orthogonal on the imaginary axis. We make a proper normalization to form system of Polynomials that are orthogonal along real axis. As a byproduct we will compute its closed form, three term recurrence relation, eigenvalue equation, Rodrigues formula and generating function. We also evaluate the discriminants of the polynomials of arbitrary degrees. (Received August 05, 2008)