

1135-33-1843

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We study the resolvent and spectral measure of certain doubly infinite Jacobi matrices via asymptotic solutions of two-sided difference equations. By finding the subdominant (or minimal) solutions or calculating the continued fractions for the difference equations, we derive explicit formulas for the matrix entries of resolvent of doubly infinite Jacobi matrices corresponding to Lommel polynomials, associated ultraspherical polynomials, and Al-Salam-Ismail polynomials. The spectral measures are then obtained by inverting Stieltjes transformations. (Received September 25, 2017)