

A connection between the Legendre polynomials and the Riemann Zeta function

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Abstract. In this talk we present all the theory developed during the last years about the Riemann Zeta function, the connection between the irrationality proof of $\zeta(2)$ and $\zeta(3)$ and the Legendre polynomials, we also discuss about the irrationality of $\zeta(2n+1)$ and its connection with the Legendre polynomials presenting infinitely many integral sequences converging to such values as fast as we want. We also present analogous results of the results mentioned above for a q -analog of the Zeta function and its connection with the q -Legendre polynomials.