

Chebyshev Polynomials Relad with Fibonacci and Lucas Polynomials

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Abstract : Fibonacci and Lucas polynomials are special cases of Chebyshev polynomial. There are two types of Chebyshev polynomials, a Chebyshev polynomial of first kind and a Chebyshev polynomial of second kind. Chebyshev polynomial of second kind can be derived from the Chebyshev polynomial of first kind. Chebyshev polynomial is a polynomial of degree n and satisfies a second order homogenous differential equation. We consider the difference equations which are related with Chebyshev, Fibonacci and Lucas polynomias. Thus Chebyshev polynomial of second kind play an important role in finding the recurrence relations with Fibonacci and Lucas polynomials.

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