

Two Analogues of Pascal's Triangle

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Abstract

Pascal's triangle is closely associated with the expansion of the product $(1 + x)^n$. We will discuss two analogous arrays of numbers that are associated with the products $\prod_{i=0}^{n-1} (1 + x^{2^i} + x^{2^{i+1}})$ and $\prod_{i=1}^n (1 + x^{F_{i+1}})$, where F_{i+1} is a Fibonacci number. All three arrays are special cases of a two-parameter family that might be interesting to investigate further.