

ZMATH 2015f.00606

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A Fibonacci curiosity.

Math. Spectr. 48, No. 1, 13-15 (2015).

Summary: Using recursion, we establish that the sums $\sum_{k \geq 0, k \text{ even}} \binom{m-k}{k}$ and $\sum_{k \geq 0, k \text{ odd}} \binom{m-k}{k}$, which occur in the well-known Lucas formula, are equal if and only if $m = 3n - 1$.

Classification: F60

Keywords: Fibonacci numbers; Lucas formula; recursion