

R. S. Melham

*New Identities Satisfied by Powers of Fibonacci and Lucas Numbers*,  
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**Abstract**

The impetus for this research came from previous work of the author and others. This work centered around finding generalizations of the identities

$$\begin{aligned}F_{n+1}^2 + F_n^2 &= F_{2n+1}, \\F_{n+1}^3 + F_n^3 - F_{n-1}^3 &= F_{3n},\end{aligned}$$

and of their higher power analogues. The main result in this paper represents an addition to the literature of such identities. Specifically, the main result is an identity satisfied by  $m$ th powers of Fibonacci numbers in which the subscripts of the Fibonacci numbers involved are arbitrarily spaced. From this main result, additional (similar) identities that involve the Fibonacci/Lucas numbers arise as so-called *dual* identities.