Proceeding as in the proof of (i), we obtain (6) by noting that $L_c F_{c-1} = 1 + F_{2c-1}$.

Proof of (ii). Identical to the proof of (i).

Derivation of (iv). Using (5) in my paper, "On Summation Formulas for Fibonacci and Lucas Numbers," this Quarterly, Vol. 2, No. 2, 1964, pp. 105-107, we obtain (for $x = p = -1$, $u_n = H_n$, $a = 2j$, and $d = 0$)

$$\text{(iv)} \quad (2 + L_{2j}) \sum_{k=0}^{n} (-1)^k H_{2jk} = (-1)^n (H_{(2j)(n+1)} + H_{2jn}) + H_0 + H_{-2j} .$$

Also solved by A. Shannon (Australia), C. Wall, and M. Yoder.

[Continued from page 267.]

Here $H(4) = 3H(2)$. But $H(2^{e+2}) = 2^e H(4)$.

This leaves us with the following problems: When do Theorems 3.6 and 3.7 hold? When does (2) hold? For the special case $u_{n+1} = u_n + u_{n-1}$, the theorems hold. A rather incomplete proof is given in [2, Theorem 5]. A complete proof is contained in [3] and will be published soon. It would be nice if these results could be established by the simple approach of [1]. Until then, one must be cautious of any results in [1].

REFERENCES

1. Birger Jansson, "Random Number Generators," Victor Pettersons Bokindustri Aktiebolag, Stockholm, 1966.
2. D. D. Wall, "Fibonacci Series Modulo m," American Math. Monthly, 67 (1960), pp. 525-532.
3. A. Andreassian, "Fibonacci Sequences Modulo m," Masters Thesis, American University of Bierut, 1968.