

2. P. Naur et al, "Revised Report on the Algorithmic Language ALGOL 60", Communications of the ACM, Vol. 6, No. 1 (January 1963), pp. 1-17.
3. S. L. Basin and V. E. Hoggatt, Jr., "The First 571 Fibonacci Numbers", Recreational Mathematics, No. 11 (October 1962), pp. 19-30. *(Continued on page 153.)*

(Continued from page 116.)

$$u_k - b = u_{k-1} u_{k-2} \cdots u_{k-(k-1)} \left[ u_{k-(k-1)} - b \right] .$$

Hence

$$u_{k_1} = (u_0 - b) \prod_{i=0}^{i=k_1-1} u_i + b .$$

Choose  $k_2 < k_1$  without loss of generality and the conclusion is apparent.

We now consider equation (1) in several special cases. If  $b = 0$  the equation is easily solved but in this case the theorem holds trivially. Let  $b = 2$ . Then we have

$$u_{k+1} = u_k^2 - 2u_k + 2 ,$$

which can be written in the form

$$u_{k+1} - 1 = (u_k - 1)^2 .$$

The solution of this equation is clearly

$$(2) \quad u_k = A^{2^k} + 1 .$$

Hence the sequence with elements  $A^{2^k} + 1$ , for integral  $A$ , is relatively prime except possibly for the common divisor 2. The exception is obviously removed when  $A$  is an even integer. When  $A = 2$ , we have the Fermat numbers mentioned previously.

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