and 30 are 24, 48, 60, and $8 \cdot 3^{j-1}$, respectively, so that by Lemma 3, all numbers $6 \cdot 5^k$, $14 \cdot 5^k$, $20 \cdot 5^k$, $3^j \cdot 5^k$ are all nondeficient. Applying (I) again we see that all numbers of the theorem are nondeficient. Thus, the theorem is proved.

It would be interesting to extend this work by considering more generally the problem of characterizing, at least partially, the residue classes that appear in the Fibonacci sequence with respect to a general modulus, as well as their multiplicities. A small start on this large problem has been made by [1], [2], and the present work, especially Lemma 3. Also of interest, both as an aid to the above and for itself, would be a systematic study of complete Fibonacci systems, whose structure can be quite complicated. In particular, it would be useful to know the set of lengths and multiplicities of the cycles. Considerable information, especially for prime moduli, bearing on this problem exists in various places; see for instance [3], [4]. Of course, these problems can be generalized to sequences satisfying other recurrence relations.

REFERENCES

1. A. P. Shah, "Fibonacci Sequence Modulo m," Fibonacci Quarterly, Vol. 6, 1968, pp. 139-141.
2. G. Bruckner, "Fibonacci Sequence Modulo A Prime $p \equiv 3 \pmod 4$," Fibonacci Quarterly, Vol. 8, 1970, pp. 217-220.
3. D. D. Wall, "Fibonacci Series Modulo m," Amer. Math Monthly, Vol. 67, 1960, pp. 525-532.
4. D. M. Bloom, "On Periodicity in Generalized Fibonacci Sequences," Amer. Math. Monthly, Vol. 72, 1965, pp. 856-861.

NINTH ANNUAL FALL CONFERENCE OF THE FIBONACCI ASSOCIATION

Nov. 13, 1971 COLLEGE OF THE HOLY NAMES, Oakland, California

Morning Session

A Triangle for the Fibonacci Powers
Charles Pasma, San Jose State College, San Jose, California

On the Number of Primitive Solutions of $x^2 - xy - y^2 = a$ in Positive Relatively Prime Integers, Professor V. E. Hoggatt, Jr., San Jose State College

Free Discussion Period

[Continued on page 526.]