

which says that a sequence of integers, which is uniformly distributed mod  $m$ , where  $m$  is composite, is also uniformly distributed with respect to any positive divisor of  $m$ , we then have that  $\{F_n\}$  is uniformly distributed mod  $p$  where  $p$  is some prime factor of  $m$ ,  $>2$  and  $\neq 5$ . This contradicts Theorem 3.

Conjecture: The Fibonacci Sequence  $\{F_n\}$  is uniformly distributed mod  $5^k$  ( $k = 3, 4, \dots$ ).

## REFERENCES

1. L. E. Dickson, History of the Theory of Numbers, I., G. E. Stechert Co., New York, 1934.
2. Verner E. Hoggatt, Jr., Fibonacci and Lucas Numbers, Houghton Mifflin Mathematics Enrichment Series, 1969.
3. I. Niven, "Uniform Distribution of Sequences of Integers," Trans. Amer. Math. Soc., 98, 1961, pp. 52-61.



[Continued from page 380.]

PERFECT N-SEQUENCES FOR  $N, N + 1$ , AND  $N + 2$ 

IA1	$P_{n+2} = 1$	$P_{n+1} = n + 1$	$P_n = n - 1$	
IA2a	1	1	$n$	$P_{n-1} = 2n$
IA2b	1	$n + 1$	$n$	$3n$
IA3a	1	$n + 1$	$2n + 1$	$n$
IA3b	1	$n + 1$	$2n + 1$	$2n$
IB1	1	$n + 2$	$n$	
IB2	1	$n + 2$	$n + 1$	
IIA1	2	1	$n + 1$	
IIA2	2	1	$n + 2$	
(I1B	2	$n + 2$	symmetrical to case IIA)	
(III	3	symmetrical to case I).		

Each of these cases is impossible except IA3a and its mirror image in case III which give only the perfect 2-sequence for 4.

Applying these methods to higher cases would either disprove them or produce examples. The length of such an application would be prohibitive, however.

## REFERENCE

1. Frank S. Gillespie and W. R. Utz, "A Generalized Langford Problem," Fibonacci Quarterly, Vol. 4, No. 2 (April, 1966), p. 184.

