PROBLEMS

1. Prove that

$$L_{2n} = L_n^2 + 2(-1)^{n+1} .$$

2. Using the Binet formulas, findthe value of:

$$L_n F_{n-1} - F_n L_{n-1} .$$

3. $F_{3n} = F_n(\qquad)$. Determine the expression for the cofactor of F_n.
4. $F_{5n} = F_n(\qquad)$. Determine the expression for the cofactor of F_n.
5. $L_{3n} = L_n(\qquad)$. Find the expression for the cofactor of L_n.
6. $L_{5n} = L_n(\qquad)$. Find the expression for the cofactor of L_n.
7. For the Fibonacci relation with $T_1 = 3$, $T_2 = 7$, find the expression for T_n in terms of powers of r and s.
8. Using the binomial expansion, find an expression for F_n in terms of powers of 5 and binomial coefficients.
9. Do likewise for L_n.
10. Assuming the relation

$$L_n + L_{n+2} = 5F_{n+1} ,$$

determine an equivalent single Fibonacci number for $F_n^2 + F_{n+1}^2$ using the Binet formula.

[Continued on p. 106.]

ERRATA FOR
A LINEAR ALGEBRA CONSTRUCTED FROM FIBONACCI SEQUENCES

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Please make the following changes in the above-entitled article, appearing in Vol. 6, No. 5, November 1968:

On page 36, change the eighth line from the end to read:

Definition 1.5. For $U, V \in \mathfrak{F}$, $UV = (u_0v_0 + u_1v_1, u_0v_1 + u_1v_0 + u_1v_1)$.

Equation (3) on p. 38 should read:

$$\begin{aligned} au_n + bu_m &= 0 \\ au_{n+1} + bu_{m+1} &= 0 . \end{aligned} \tag{38}$$

On p. 42, 11 lines from the end, change the "F" to a script $\mathfrak{F}$.

On p. 49, in the equation preceding Eq. (10), change α_i to ω_i .

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