5. Verner E. Hoggatt, Jr., & Marjorie Bicknell-Johnson. "Generalized Fibonacci Numbers Satisfying $u_{n+1}u_{n-1} - u_n^2 = \pm 1".$ The Fibonacci Quarterly 16, No. 2 (1978): 130-137.


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LETTER TO THE EDITOR

DAVID L. RUSSELL

University of Southern California, University Park, Los Angeles, CA 90007

Dear Professor Hoggatt:

... In response to your request for me to point out the errors in your article "A Note on the Summation of Squares," The Fibonacci Quarterly 15, No. 4 (1977): 367-369, ... I have enclosed a xerox copy of your paper with corrections marked. The substantive errors occur in the top two equations of p. 369, where an incorrect sign and some minor errors result in an incorrect denominator for the RHS. As an example, consider the case $p = 1, q = 2, n = 4$; your formula evaluates to 0, which is clearly incorrect:

$$P_0 = 0, P_1 = 1, P_2 = 1, P_3 = 3, P_4 = 5, P_5 = 11, P_6 = 21;$$
$$8P_6^2 - (P_6^2 - 1) = (8)(11)(5) - 440 = 0.$$ Only if the denominator is also zero does a numerator of zero make sense.

Sincerely yours,

[David L. Russell]

CORRECTIONS TO "A NOTE ON THE SUMMATION OF SQUARES"

BY VERNER E. HOGGATT, JR.

The following corrections to the above article were noted by Prof. David L. Russell.

Page 368: The equation on line 19, $q^{n-1}P_2P_1 = q^{n-1}P_2 + q^n P_1 P_0$, should be:

$$q^n P_2 P_1 = q^{n+1} P_1 P_0$$

The equation on line 27, $P_{j+2} = P_j P_{j+1}^2 + q^2 P_j^2 + 2pq P_j P_{j+1}$ should be:

$$P_{j+2}^2 = P_j^2 P_{j+1}^2 + q^2 P_j^2 + 2pq P_j P_{j+1}$$

In the partial equation on line 32 (last line) the $=$ sign should be a $-$ (minus) sign.

Page 369: Lines 1-11 should read:

$$pP_{n+1} + \left( \sum_{j=1}^{n} P_j^2 \right) \left( p + (1 - q)(P^2 + q^2 - 1) \right)$$

$$= P_{n+2}^2 P_{n+1} + \frac{1 - q}{2pq} \left[ P_{n+2}^2 + P_{n+1}^2 - 1 - p^2 P_{n+1}^2 \right]$$