OBSERVATION

Has anyone noticed this before? While trying to see if the Fibonacci numbers could be used to make magic squares, I discovered that no set of consecutive Fibonacci numbers could be so used. Can you demonstrate this?

REFERENCES

1. Solomon W. Golomb, "Checkerboards and Polyominoes," Amer. Math. Monthly, Vol. 61, No. 10 (December 1954), pp. 675-682.

2. R. K. Pathria, "A Statistical Study of Randomness Among the First 10,000 Digits of π," Mathematics of Computation, Vol. 16, No. 78 (April 1962), pp. 188-197.

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(continued from p. 191.)

$$\sum_{n=0}^{\infty} F_{n+k}^7 x^n = \frac{P_k(x)}{1 - 21x - 273x^2 + 1092x^3 + 1820x^4 - 1092x^5 - 273x^6 + 21x^7 + x^8}, \quad \begin{array}{l} k=0,1,2, \\ 3,4,5,6,7 \end{array}$$

$P_0(x) = x(1 - 20x - 166x^2 + 318x^3 + 166x^4 - 20x^5 - x^6)$

$P_1(x) = 1 - 20x - 166x^2 + 318x^3 + 166x^4 - 20x^5 - x^6$

$P_2(x) = 1 + 107x - 774x^2 - 1654x^3 + 1072x^4 + 272x^5 - 21x^6 - x^7$

$P_3(x) = 128 - 501x - 2746x^2 - 748x^3 + 1364x^4 + 252x^5 - 22x^6 - x^7$

$P_4(x) = 2187 + 32{,}198x - 140{,}524x^2 - 231{,}596x^3 + 140{,}028x^4 + 34{,}922x^5 - 2687x^6 - 128x^7$

$P_5(x) = 78{,}125 + 456{,}527x - 2{,}619{,}800x^2 - 3{,}840{,}312x^3 + 2{,}423{,}126x^4 + 594{,}364x^6 - 46{,}055x^6 - 2187x^7$

$P_6(x) = 2{,}097{,}152 + 18{,}708{,}325x - 89{,}152{,}812x^2 - 139{,}764{,}374x^3 + 85{,}906{,}864x^4 + 21{,}332{,}070x^5 - 1{,}642{,}812x^6 - 78{,}125x^7$

$P_7(x) = 62{,}748{,}417 + 483{,}369{,}684x - 2{,}429{,}854{,}358x^2 - 3{,}730{,}909{,}776x^3 + 2{,}311{,}422{,}054x^4 + 570{,}879{,}684x^5 - 44{,}118{,}317x^6 - 2{,}097{,}152x^7.$

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