$$\boxed{1p \cdot \frac{1}{2}}\, 4 \text{ or } \boxed{\frac{p \cdot 1}{1 \cdot 2}}\, 4 .$$

Thirdly, in an unpublished manuscript, Oresme found the sum of the series derived from the sequence (1). Such recurrent infinite series did not generally appear again until the eighteenth century.

In all, Oresme was one of the chief medieval theological scholars and mathematical innovators. It is the writer's hope that something of Oresme's intellectual capacity has been appreciated by the reader. With this in mind, we honor his name by associating him with the extended recurrence sequence (4), of which he had a glimpse so long ago.

REFERENCES

1. F. Cajori, *A History of Mathematics,* Macmillan, 1919.
2. L. Carlitz, "Generating Functions for Powers of Certain Sequences of Numbers," *Duke Mathematical Journal,* 29 (4), 1962, pp. 521–538.
3. L. Hogben, *Mathematics in the Making,* Macdonald, 1960.
4. A. Horadam, "Basic Properties of a Certain Generalized Sequence of Numbers," *The Fibonacci Quarterly,* Vol. 3, No. 3 (October, 1965), pp. 161–176.
5. A. Horadam, "Special Properties of the Sequence $w_n(a,b;p,q)$," *The Fibonacci Quarterly,* Vol. 5, No. 5 (Dec. 1967), pp. 424–434.
6. A. Horadam, "Generating Functions for Powers of a Certain Generalized Sequence of Numbers," *Duke Math. Journal,* 32 (3), 1965, pp. 437–446.
7. A. Horadam, "Pell Identities," *The Fibonacci Quarterly,* Vol. 9, No. 3 (Oct., 1971), pp. 245–252, 263.
8. C. Johnson (ed.), *The DeMoneta of Nicholas Oresme,* Nelson, 1956.
9. E. Lucas, *Thèorie des Nombres."* Paris, 1961.
10. Nicole Oresme, *Quaestiones super Geometriam Euclides,* H. Busard, Ed., Brill, Leiden, 1961.
11. D. Zeitlin, "Power Identities for Sequences Defined by $w_{n+2} = dw_{n+1} - cw_n$," *The Fibonacci Quarterly,* Vol. 3, No. 3 (Oct., 1965), pp. 241–256.
12. D. Zeitlin, "On Determinants whose Elements are Products of Recursive Sequences," *The Fibonacci Quarterly,* Vol. 8, No. 4 (Dec. 1970), pp. 350–359.
13. D. Zeitlin, "General Identities for Recurrent Sequences of Order Two," *The Fibonacci Quarterly,* Vol. 9, No. 4, (Dec. 1971), pp. 357–388, 421–423.

****

INCREDIBLE IDENTITIES

DANIEL SHANKS
Naval Ship R&D Center, Bethesda, Maryland 20034

Consider the algebraic numbers

$$A = \sqrt{5} + \sqrt{22 + 2\sqrt{5}}$$

$$B = \sqrt{11 + 2\sqrt{29}} + \sqrt{16 - 2\sqrt{29} + 2\sqrt{55 - 10\sqrt{29}}}$$

To 25 decimals they both equal

$$7.38117\ 59408\ 95657\ 97098\ 72669 .$$

Either this is an incredible coincidence or

(1) $$A = B$$

is an incredible identity, since A and B do not appear to lie in the same algebraic field. But they do. One has

(2) $$A = B = 4X - 1,$$

[Continued on page 280.]