

If desired, the sum of this recurring series may be put into the alternative forms (by the usual methods):

$$u_n(2q - 1) = \frac{1}{2}[4^q \sum_{s=1}^n \{-3^{-s} - (-1)^s\}(2q +)_{n-s} + (-1)^n + 3^{-n}].$$

$$u_n(2q) = \frac{1}{2}[4^q \sum_{s=1}^n \{3^{-s} - (-1)^s\}(2q +)_{n-s} + (-1)^n - 3^{-n}].$$

From either form we may get the following table of values of  $u_n(k)$ :

*Number of Moves per Game.*

$k$ = number of rings per row	$n$ = number of rows of rings				
	1	2	3	4	5
1	1	1	1	1	1
2	2	4	6	8	10
3	5	13	25	41	61
4	10	36	86	168	290
5	21	93	265	601	1181
6	42	228	758	1960	4322
7	85	541	2057	5977	14621
8	170	1252	5366	17590	46562
9	341	2485	13577	48217	141341
10	682	6372	33526	130230	412642

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CORRESPONDENCE.

REFERENCE FOR SIMILAR TRIANGLES.

To the Editor of the *Mathematical Gazette*.

SIR,—Referring back to some correspondence on notation for similarity, which appeared in the *Gazette*, Vol. XXIII (1939), I note that Mr. G. H. Grattan-Guinness proposed the symbol |||. This symbol was used in a text-book, *A New Geometry for Schools* by George Lawson, published in 1914 by Messrs. W. & R. Chambers. I was myself a pupil of Mr. Lawson, who taught me to use this symbol, and I have always used it in my own teaching.

I agree with Mr. Grattan-Guinness as to the advantages of using this sign, and would like to see it more widely adopted. Yours, etc., M. P. BOYTER.

1450. Most of [the subjects in education] are concerned with what I have called sub-ordinate purposes or ends. Mathematics, for instance. The pupil learns it in order to become an engineer or an accountant or to add up marks or his house books or for some similar purpose; and also perhaps because it trains the mind. But mathematics is not concerned with the ultimate end of life; no one is the wiser about that for the hours he spends with Godfrey and Price's *Arithmetic* or Durell's *Geometry*.—Sir Richard Livingstone, *The Future in Education* (Cambridge, 1941), p. 117. [Per Mr. F. W. Kellaway.]