Neil J. A. Sloane in his office with some tools of his trade.
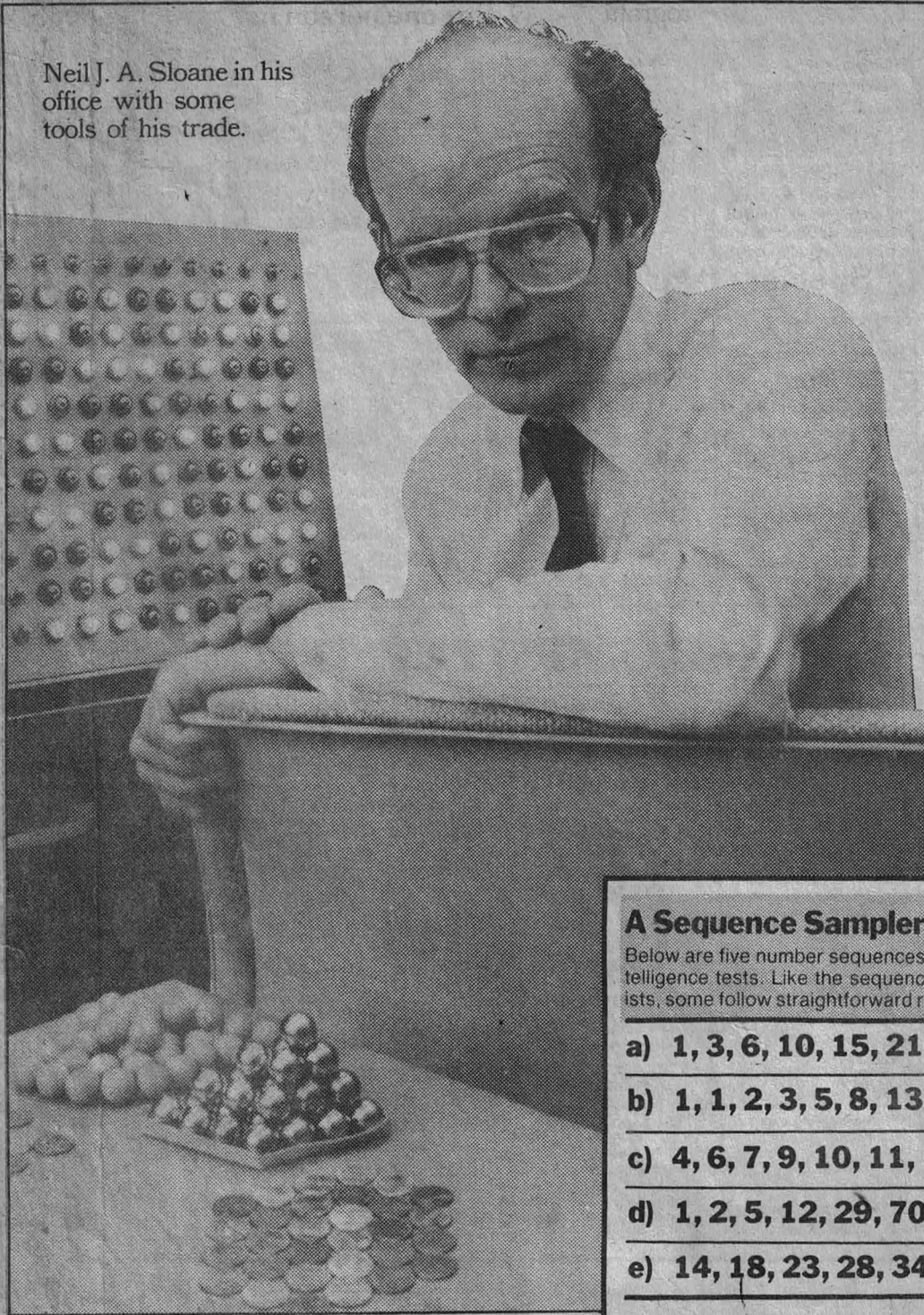
The New York Times/William E. Sauro

Mathematician's list now contains 5,000 number sequences.

By JAMES GLEICK

WITHOUT quite meaning to, Neil J. A. Sloane has become the world's clearinghouse for number sequences.

He keeps track of easy ones, like 1, 2, 4, 8, 16, 32 . . ., the powers of two. He keeps track of hard ones, like 1, 1, 2, 5, 14, 38, 120, 353 . . ., the number of different ways of folding ever-longer strips of postage stamps. Among his sequences are the famous and the obscure: perfect, amicable and lucky numbers; Fibonacci, tribonacci and tetranacci numbers.

When a physicist stumbles upon a sequence he cannot explain, or a computer scientist creates a sequence he thinks is new, he writes to Dr. Sloane, a

mathematician at AT&T Bell Laboratories in Murray Hill, N.J. Dr. Sloane then retrieves it from, or adds it to, his master list, now numbering around 5,000 different sequences.

It is a pursuit with an element of whimsy, as he readily admits. But it also reaches toward the heart of something that gives mathematics its uni-

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A Sequence Sampler

Below are five number sequences of the kind used, for better or worse, on intelligence tests. Like the sequences often uncovered by physicists or chemists, some follow straightforward rules — but not all.

a) 1, 3, 6, 10, 15, 21, 28, 36, 45, 55. . .

b) 1, 1, 2, 3, 5, 8, 13, 21, 34, 55. . .

c) 4, 6, 7, 9, 10, 11, 12, 14, 16, 17. . .

d) 1, 2, 5, 12, 29, 70, 169, 408, 985. . .

e) 14, 18, 23, 28, 34, 42, 50, 59, 66, 72. . .

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a) 66 — triangular numbers: 1+2+3+4+5+. . . . b) 89 — Fibonacci numbers: each is the sum of the two previous. c) 18 — all the numbers that do not occur in the sequence above. d) 2378 — Pell numbers: double the last term and add the second-to-last. e) 79 — West Side IRT local stops.

STAGE: Charles Keating: Common Man for all seasons, page C13. / **THEATE**

BOOKS: 'Russian Studies,' by Leonard Schapiro, page C17. / **TV:** 'The R