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8 March 1988

MR N.J.A. SLOANE
Mathematics Research Center
BELL TELEPHONE LABORATORIES, Inc.
MURRAY HILL
New Jersey - 07974
UNITED STATES OF AMERICA

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Dear Mr Sloane,

A HANDBOOK OF INTEGER SEQUENCES

I have come across a sequence that you may find useful for inclusion in a future edition of your abovementioned book, namely:-

1, 2, 3, 4, 5, 6, 7, 8, 9, 153, 370, 371, 407, 1634, 8208, 9474, 54748, 92727, 93084, 548834

This is the sequence of the Armstrong Numbers; an Armstrong Number may be defined as: any n-digit number in which the sum of the nth power of the digits is equal to the original number. E.g. 9474, a 4-digit number is equal to the total of the 4th power of its digits ($9^4=6561$, $4^4=256$, $7^4=2401$, $4^4=256$, total 9474).

There are 20 Armstrong Numbers under 1,000,000 and no doubt more after this number; however, they appear to become very scarce as there was only 1 Armstrong Number with 6 digits. Finding the next one would take too long on my IBM PC but could no doubt be conveniently calculated on a bigger and faster computer.

The only reference that I can offer is a book published by SYBEX Inc. in 1981 with the title: Fifty Basic Exercises by J.P. Lamoitier, originally published in French by SYBEX-Europe in 1980 as Le Basic par la Pratique (50 Exercises). The author does not provide any bibliography or any reference.

I should be pleased to receive (a) supplement(s) to the Handbook issued since it was published in 1973.

With kind regards,

Yours sincerely,



HANS DE JONG