

Scan A3462

H V Krishna

~~Q~~ & WJAS

Comparison

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sq! New Seq - to be added

✓ Dean Sir,

Thank you for your kind letter and the supplement I of the interesting book. I request you to please remember me when the subsequent supplements appear and send me the same.

I do not know any other reference except the American Math Monthly (mentioned in my previous letter) regarding the sequences I sent you last time. I am trying to find an algorithm to get the other members of the sequence and I promise to send you more term or and when (and if) I find them.

Meanwhile there is another sequence with me which I was not able to find in your book. It is the generalised Mersenne sequence  $\{GM_n\} = \frac{1}{2}(3^n - 1)$   
Ref: On Mersenne and Fermat Numbers, The Mathematics Student (Published by Indian Math Society) Vol. 39 No. 1 pages 51 + 52 (authr myself). Each member of the sequence can be expressed as a sum of squares. For eg, 1, 4, 13, 40, 121, 364,  
a  $1, 2^2, 2^2 + 3^2, 2^2 + 6^2, 2^2 + 6^2 + 9^2, 2^2 + 6^2 + 9^2 + 18^2$  etc etc

① There are no cubes in this sequence ② No GM number is a sum of two cubes + ③ No GM number is a sum of three cubes. I have proved these theorems in that note.

If it is suitable to find a place in your book then I give below <sup>(or on reverse)</sup> the sequence. (sufficient to fill two lines in your book.)

Thankin you.

(See reverse)

हवाई पत्र  
AEROGRAMME



To Prof. N. J. A. Sloane  
Mathematical Research Centre  
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Murray Hill  
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दूसरा मोड़ SECOND FOLD

इस पत्र के अन्दर कुछ न रखिये NO ENCLOSURES ALLOWED

सेन्डने वाले का नाम और पता SENDER'S NAME AND ADDRESS

H. V. Krishna  
Manipal Institute of Technology  
Manipal

पिन PIN 576119

भारत INDIA

पहला मोड़ FIRST FOLD

Generalized Mersenne sequence  
 $\{G_n\} = \frac{1}{2}(3^n - 1)$

1, 4, 13, 40, 121, 364, 1093, 3280, 9841, 29524,  
88573, 265120, 797161, 2391484, 7174453,  
21523360, 64570081, 193710244, 581130733,  
1743392200, 5230176601, 15690529804,  
47071589413, 141214768240, ...

With regards.

Yours sincerely  
H. Krishna

A3462

August 28, 1975

Professor H. V. Krishna  
Mathematics Department  
Manipal Institute of Technology  
Manipal  
INDIA 576119

Dear Dr. Krishna:

Thank you for your kind letter of August 4. The sequences you describe are new to me, and are very interesting. Is it possible for you to send me more terms (enough to fill 2 lines of the book)? Also, could you please supply the definitions and any references?

I enclose a copy of Supplement I to the book, the only one which has been issued so far (although another is long overdue).

It was kind of you to write.

Yours sincerely,

MH-1216-NJAS-mv

N. J. A. Sloane

Enc.  
As above