619 Greythorne Road
Wynnewood, Pa.   19096
July 17, 1975

Dr. N. J. A. Sloane
Bell Laboratories 2C-363
600 Mountain Avenue
Murray Hill, N. J.   07974

Dear Dr. Sloane:

Thank you for your letter of July 2, with the interesting puzzle sequence. The sequence satisfies the following recurrence:

$$R_0 = 1$$

$$R_{n+1} = 2R_n(2^n + 1).$$

I have enclosed a copy of the first 26 terms for your use.

I am enclosing copies of the extensions of the following sequences: 1727, 1759, 986, 1073, 11186, 1635, 1215, 2349, 2359. I am also enclosing two new sequences that appeared in a recent "Mathematical Games" column. Finally, I would suggest that a new reference for sequence 953.5 might be Scientific American; March, 1975, pps. 113-4.

You may laugh at this, but I would suggest that you include in your next supplement the odd and even integers as new sequences, for purely historical reasons and for completeness.

For your files, you may be interested that I have checked the following sequences and have found them all to be correct: 953.5, 1140, 945, 1316, 686, 335, 549, 563, 925, 260, 1815, 1684.

Finally, I am curious: what is the meaning of "TA CARD" at the end of your book?

I realize you are probably very busy--please do not feel pressed to answer this letter.

Sincerely yours,

Jeffrey Shallit
Jeffrey Shallit

Sequence 1215 (Extended).

The next 9 terms are:

10604

11715

13365

18315

22935

25545

32864

38804

39524

Sequence 2349 (Extended).

The next 10 terms are:

1522

1567

1627

1657

1732

1852

1942

2047

2062

2152

Sequence 2359 (Extended):

The next 13 terms are:

1502

1523

1658

1733

1838

1943

1964

2048

2063

2153

2228

2243

2258

1837