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ONE CHASE MANHATTAN PLAZA New York 10005

May 8, 1974

Neil J. A. Sloane, as author of A Handbook of Integer Sequences c/o Academic Press 111 Fifth Avenue New York, N.Y. 10003

Dear Mr. Sloane:

I read your book today and was delighted to see that it contains a very nice treatment of knots. Unfortunately, it also perpetuates an error.

The seventh number in sequence 323 (at page 54) should be 165, and not 166. As discussed in the enclosed proof (also, AMS Notices 20, A-453 and Zentralblatt für Mathematik 256, 367), there is a duplication in the nineteenth century table of nonalternating 10-crossing knots which Conway overlooked.

Of course, both seg. 322 and 323 count only prime knots, and the eighth number in each is really just a guess.

Very truly yours,

Kenneth A. Perko, Jr.

and

and to ma





May 24, 1974

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

Dear Mr. Sloane:

Thank you for your letter of May 21, 1974, and enclosure. I would appreciate a copy of your next Supplement, when available.

I expect both papers will appear in a couple of months, and will send you reprints when I get them. Meanwhile, here's a "preprint" of the Glasnik one.

Sincerely yours,

Kenneth A. Perko, Jr.

KAP/pw

Enclosure



One Chase Manhattan Plaza New York 10005

February 10, 1977

Dr. N.J.A. Sloane Bell Laboratories 600 Mountain Avenue Murray Hill, New Jersey 07974

Dear Dr. Sloane:

Enclosed is a preprint which sheds some new light on the number of (known, prime) knot types with eleven crossings.

Your <u>Handbook</u>, Seq. 323 at p. 54, lists this number as "549" -- the number of listings in J.H. Conway's table. However, Conway lists knot 8*-210:.20 twice and omits at least two other knot types, discovered by David A. Lombardero, both of which

- (1) admit 11-crossing projections,
- (2) are in fact prime, and
- (3) can be distinguished from the 250 known primes with fewer crossings (249 + the trivial type) as well as from the 548 ll-crossing knots tabulated by Conway.

Accordingly, the presumptive number of ll-crossing primes would seem to be 550.

Of course, it remains to be <u>proven</u> that they are all in fact prime and distinct and that, with these two additions, the tables are now complete. Conway's methods

seem quite reliable with respect to the question of primeness, but even this assumption may turn out to be false.

Very truly yours,

Kenneth A. Perko, Jr.

KAP:lg

Enclosure