A6455

Scan

N Hindman

&

NJAS

Correspondence

1981-1991

4 pages

6455

7/20/81

Dear Dr. Sloane,

Stefan Burr informed me some time ago that you had expressed some interest in the following sequence:

$P(0) = 1$
$P(1) = 1$
$P(2) = 2$
$P(3) = 7$
$P(4) = 40$
$P(5) = 357$
$P(6) = 4824$
$P(7) = 96428$
$P(8) = 2800472$
$P(9) = 116473461$
$\vdots$

NBH

Here $P(n)$ is the number of partial orderings on $\hat{n}$ which are contained in the usual linear ordering on $\hat{n}$. (That is $xRy \Rightarrow x < y$.) (Also, $\hat{0} = \emptyset$ and for $n \geq 1$, $\hat{n} = \{1, 2, \ldots, n\}$.)

I have a relatively efficient algorithm for computing these numbers. In particular, the numbers up through 7 were originally obtained via hand computation.

At this point it seems unlikely that I will try to publish these results, since the theorems needed to justify the recursion are messy to prove and, beyond the algorithm for computation, I do not get any nice upper or lower bounds.

If you are interested in a description of the algorithm and/or the justifying theorems I will be happy to send them to you.

Sincerely,

Neil Hindman

AT&T

AT&T Bell Laboratories

600 Mountain Avenue
Murray Hill, NJ 07974-2070
908-582-3000

June 26, 1991

Professor Neil Hindman
Mathematics Department
Howard University
Washington, DC 20059

My Ref. A6455

Dear Neil:

I would like to include the enclosed sequence in the second edition of my Sequence book—is there a reference?

Best regards,

N. J. A. Sloane

Encl.

Bell Laboratories

600 Mountain Avenue
Murray Hill, New Jersey 07974
Phone (201) 582-3000

August 4, 1981

Professor Neil Hindman
Mathematics Department
Howard University
Washington, D.C.   20059

Dear Neil:

Many thanks for the sequence, which I will put into the second edition (long delayed).

Yours sincerely,

MH-11216-NJAS-mv   N. J. A. Sloane