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88-07-08

plus with equal cycle lengths

Dr. Neil J.A. Sloane,  
AT&T Bell Laboratories, Room 2C-376,  
600 Mountain Avenue,  
MurrayHill, N.J. 07974

Dear Neil,

Must be nearly a month since I wrote.

Hanafi Farahat, from the next office, wanted to know about the number of regular permutations, i.e. those whose cycle lengths are all equal. The answer is the sum of  $n!/e^{n/d}$ , taken over the divisors,  $d$ , of  $n$ , and  $de = n$ .

For  $n = 1, 2, \dots$  the answers are

1, 2, 3, 10, 25, 176, 721, 6406, 42561, 436402, 3628801, 48073796,  
479001601, ~~7116610215~~, ... 7116730336, 88966701825, 1474541093026, 20922789888001, ...

and Hanafi may calculate a few more for you before this gets mailed. ✓

This seems to be neither in Sloane nor his Supplement.

I'll be in A.C.C. G.M.C. from 88-07-21 to 88-08-05 and in Providence 88-08-07 to 13. I also plan to be in Princeton, 88-10-02 to 23, approx.

Best wishes,

Yours sincerely,

Richard

RKG:1

Richard K. Guy.