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R K Guy  
letter

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FACULTY OF ARTS AND SCIENCE / DEPARTMENT OF MATHEMATICS, STATISTICS AND COMPUTING SCIENCE

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A3320  
A5530  
A3319  
A259472  
A616  
A371

Dear Neil,

Louis Comtet visits here in a month's time, so I was looking through some of his papers and came up with the enclosed. Your 1188 and 1189 are (only) close to  $f(n)$  in the 1972 paper. I don't know if the coefficients in  $g(n)$ , foot of p. 571, also qualify. You have the Schröder numbers in the 1974 paper, but not  $a(n)$  on p. 250.

A3319 and A259472

I found a few others when reviewing Ioan Tomescu, *Introducere in combinatorică*, Editura tehnică, București, 1972, for Zentralblatt: (1) the maximum number of (minimal) colorings of a graph on  $n$  vertices is realized by a complete graph on  $r$  vertices (forcing  $r$  colors) and  $n-r$  isolated vertices, which are

colored in  $r^{n-r}$  ways.  $\max r^{n-r}$  is attained for  $r = [x]$  or  $\{x\}$  where  $x(1+\ln x) = n$ . I have copied the table on p. 231 of the book. (2) In Table 9.2 on p. 129 he

has your <sup>A616</sup> 1026, Boolean functions, to  $n = 6$ , also  $2^{2^n}$  (not interesting?) and

<sup>A5530</sup>  $2^{2^n} - E(2,2,n)$ , i.e. 2,6,38,942,325262,... . I will copy two pages, there are references, and if your Romanian is almost as good as mine, you may discover the significance. (3)  $E(2,2,n)$  occurs on p. 45, in fact on p. 44 we have

$$E(n,m,k) = m^{n^k} - \binom{k}{1} m^{n^{k-1}} + \binom{k}{2} m^{n^{k-2}} - \dots + (-1)^k m. \quad (3.9)$$

~~1399~~ <sup>A371</sup>  $E(2,2,n) = 2, 10, 218, 64594, 4294642034, \dots$  (close to your 785, cf. also 677, 678, 683 and perhaps 682 - perhaps all related if I cared to chase the references).

no

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Many well-known mathematicians will be here from now on, either attending the Canad. Math. Congress Summer Res. Inst., or one of several conferences, or just thumbing their way to Vancouver. Will you be among them?

Best wishes,

Yours sincerely,



Richard K. Guy

RKG:km  
encl.