THE UNIVERSITY OF CALGARY

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

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Dear Neil,

Just a brief note while I am endeavoring to clear my desk prior to departure for Britain on Monday. I can be reached intermittently at DPMMS, 16 Mill Lane, Cambridge CB2 1SB, and will be back here on August 4.

I am intrigued by the title of a paper, which I have seen only in "Current Math. Pubs." Kenneth R. Rebman, The sequence 1 5 16 45 121 320 ... in combinatorics, Fibonacci Quarterly 13(1975) 51-55. A4146

Here is another triangular array which I came across while trying to analyze the n-person game in which the winner is the largest *unique* choice from $[1,N]$, no person knowing anyone else's choice. When $n = N$, let $g_{n,k}$ be the #, out of all possible games (i.e. all n^n sets of choices) which are won by a given player who has chosen k.

$n = 1$	1									
$n = 2$	1	0								$1 = (2^2-2)/2$
$n = 3$	4	2	2							$8 = (3^3-3)/3$
$n = 4$	27	15	9	3						$54 = (4^4-40)/4$
	256	148	88	52	40					$584 = (5^5-205)/5$
	3125	1845	1105	665	405	205				$7350 = (6^6-2556)/6$
	46656	27906	16836	10206	6216	3786	2556			$114162 = (7^7-24409)/7$
	823543	496951	301609	183757	112315	68803	42301	24409		$2053688 = (8^8-347712)/8$
	16777216	10188872	6213264	3800392	2330336	1431816	881392	542984	347712	$42513984 = (9^9-4794633)/9$

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Sloane #1469

$g_{n,n} = (n-1)^{n-1}$. $g_{n+1,1} = u_n$, the number of undecided games between n players. $g_{n+1,k} = g_{n+1,k+1} - ng_{n,k}$.

Best wishes,

Yours sincerely,

Richard.

Richard K. Guy

RKG:km