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Dear Klarner (1992 I 13)

I just arrived here, will be here this week and will preach tomorrow and on thursday. I was sorry to hear that you are in Eindhoven, I was there in 1967 with my mother. Please give my regards to my many friends there. Just by accident I came across a few minutes ago an old paper of mine (Extremal problems in number theory) among others I consider there the following

problems: Let $a_1 < a_2 < \dots < a_n$ be n integers I prove that you can always find $\frac{n}{3}$ of 1965 Amer. Math Soc meeting in Pasadena 1963 Vol VIII
them which are sum free i.e. $a_{i_1}, \dots a_{i_k}$, $k > \frac{n}{3}$ $a_{i_{r_1}} + a_{i_{r_2}} \neq a_{i_{r_3}}$, $\frac{n}{3}$ can probably be improved but not beyond $\frac{11}{28} n$, then I also ask how many a's can you find that the sum of two ~~dist~~ of them $a_i + a_j \neq a_l$, $i \neq j$ i.e. $a_{i_1}, \dots a_{i_k}$ but the sum of two a's is not one of the $a_1, \dots a_n$ not only not one of the $a_{i_1}, \dots a_{i_k}$. $i = j$ must be forbidden otherwise $a_i = 2^i$ would kill the problem. I state that you proved that $k > c \log n$, probably much more is true.

Let $a_1 < a_2 < \dots < a_k < n$, $k > \varepsilon n$ is it true that if $n > n_0(\varepsilon)$ then there are three a's which have pairwise the same least common multiple? Is this a good problem or trivially true or false??

Another such question $a_1 < a_2 < \dots < a_t \leq n$ and no $a_j = a_i + a_{i+1} + \dots + a_{i+r}$ max $t = ?$ I first thought that max $t = \frac{n}{2} + 1$ but Pomerance found for $n = 4m$ (m odd) $2m+2$ such numbers. $m-1, m, m+1, \frac{3m-1}{2}, \frac{3m+1}{2}, 2m \dots$ and all the integers $2m < t \leq 4m$ which are not forbidden (exactly 4 are forbidden e.g. $m=5$ $n=20$ 4 5 6 7 8 10 12 14 16 17 19 20. Can you get a good bound
15 = 7+8 18 = 10+8 are forbidden

for t ? $\frac{n}{2}(1+o(1))$ is true ?

I hope your health is good, You can always reach me at my Budapest adress or c/o Dr RL Graham Bell Laboratories Murray Hill ~~Hill~~ New Jersey 07974.

Kind regards to all, au revoir

E. P.

You probably know that the Rados both died, but their son Peter + family lives in the house.