
Zbl 010.29401
Erdős, Paul; Turán, Pál
On a problem in the elementary theory of numbers. (In English)
Am. Math. Mon. 41, 608-611 (1934). [0002-9890]

The following two theorems are proved by elementary methods.
1. If $a_1, ..., a_n$ are different positive integers, and $n \geq 3 \cdot 2^{k-1}$, then the numbers $a_i + a_j (i, j = 1, 2, ..., n)$ cannot all be composed only of k given primes.
2. If $a_1 < ... < a_{k+1}$ are positive integers, and $b > a_{k+1}^k$, then the numbers $a_i + b$ $(i = 1, 2, ..., k+1)$ cannot all be composed of only k given primes. On p.610, line 8 from below, read $p_k^{\alpha_k}$ for $p_{k-1}^{\alpha_{k-1}}$ on p.611, line 7, read "that each one" for "that one".

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Classification:
11B83 Special sequences of integers and polynomials