ABOUT NEW FILLINGS METHOD IN NUMBER THEORY

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New developed method of fillings for classes of systems of grids is offered in [1]. The grid is infinite Boolean sequence, where period of zeroes is a_n as module $2 \leq a_n \in \mathbf{N}$, including primes p_n. The filling is special product of grids. Justified imaging principle is used. The main theorem for estimation of maximum series of zeroes for classes of systems, and also without a support on the imaging principle is proven within the framework of the method. Method of fillings or frequencies of zeroes isn't a variant of sieving process.

Theorem. If the main theorem of the fillings method is valided, then in particular:

1. Most distance between primes $p_n - p_{n-1} \leq c_n\sqrt{p_n}$, where $c_n < 4$.

2. The set of twins $\{B_n\}$ is infinite and valuation of most distance between them is $B_n - B_{n-1} < C_n\sqrt{B_n}\ln B_n$, where $C_n < C$, $C > 1$ – some constant.

3. Goldbach's Conjecture for even (binary problem) in the strengthened formulation: $\lim\limits_{I_s \to \infty} \inf\limits_{2M \in [I_s]} \{G(2M)\} = \infty$, $G(2M)$ – quantity of different Goldbach's representations.

[1] M. V. Antipov. *The Fillings Method and Problems of Prime Numbers Distribution*, Siberian Academy of Stateservice, Novosibirsk, 2002, 503 p.