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A CORRECTION TO OUR PAPER

"ON THE MAXIMAL VALUE OF ADDITIVE FUNCTIONS..."

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In our paper [1] we stated erroneously that Theorem 1 is a consequence of Theorem 1′. In fact, the converse implication is true: Theorem 1 implies Theorem 1′.

Now we prove Theorem 1. From (1.9) it follows that

$$\sum_p \frac{\min(1, g(p))}{p} < \infty. \tag{1}$$

Indeed, if (1) does not hold, then $g(n) \to \infty$ $(n \to \infty)$ for the set of n having asymptotic density 1, that contradicts (19). Let $\varepsilon' > 0$, ν a fixed integer. We shall prove that

$$f_{\nu k}(0) \leqq (1+\varepsilon') f_k(0) \tag{2}$$

holds for all $k \geqq k_0(\nu, \varepsilon')$. Observing that

$$f_{\nu k}(0) \leqq f_{\nu k}(n) = \max\{f_k(n), f_k(n+k), \dots, f_k(n+(\nu-1)k)\},$$

we have (2) from (1.9) immediately. From (2) we get that $f_k(0) = O(k^\varepsilon)$, ε being an arbitrary positive number.

The further part of the proof is the same as that of Theorem 1′ in [1].

Reference

[1] P ERDŐS and I. KÁTAI, On the maximal value of additive functions in short intervals and on some related questions, *Acta Math. Acad. Sci. Hungar.*, **35** (1980), 257—278.

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