ERRATA TO "SOME PROBLEMS OF ERDŐS ON THE SUM-OF-DIVISORS FUNCTION"

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(i) The statement of Proposition 2.2 should be modified as follows.

Proposition 2.2′. The number of convenient solutions to $\sigma(n) \equiv a \pmod{n}$ with $|a| < n \le x$ is at most $x^{1/2+o(1)}$, as $x \to \infty$, uniformly in a with $|a| \le x$.

In other words, we need to impose the additional requirement that $n > |a|$.

We overlooked that both Lemma 6 and Theorem 1 in [1] use the condition $n > |a|$ in their proofs. Apart from this oversight, the proof of Proposition 2.2 is unchanged.

Proposition 2.2 is applied in the proof of Lemma 2.3 to count certain solutions to $\sigma(m) \equiv a \pmod{m}$; it is clear from the third display in the proof of that lemma that the condition $m > |a|$ required to apply Proposition 2.2′ is satisfied.

(ii) Conjecture 2.4 was stated incorrectly; regular solutions to the congruence $\sigma(n) \equiv a \pmod{n}$ were intended to be excluded from the count. Unfortunately, even in this corrected form, the conjecture is false; this is shown in recent joint work of the authors with L. Thompson [2].

References

[1] A. Anavi, P. Pollack, and C. Pomerance, *On congruences of the form* $\sigma(n) \equiv a \pmod{n}$, Int. J. Number Theory **9** (2013), 115–124.

[2] P. Pollack, C. Pomerance, and L. Thompson, *Divisor-sum fibers*, preprint.

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