

**ADDENDUM AND CORRIGENDUM TO  
“THE REPRESENTATION OF NUMBERS  
AS SUMS OF UNLIKE POWERS, II”**

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Professor Jörg Brüdern has kindly pointed out some errors in Table 1 and Table 2 of my paper [1]. Specifically, the values of  $\lambda(4, 4)$  and  $\lambda(4, 5)$  in Table 1 are better than can actually be deduced from the literature, and they lead to errors in the first three lines of Table 2. The main mistake was an erroneous combination of results from [3] and [4] to determine  $\lambda(4, 4) = 4.5627\dots$ , which incidentally has also appeared in another paper [2]. The correct values for Table 1 (rounded up in the last decimal place) are

$$\lambda(4, 4) = 4.5951377$$

$$\lambda(4, 5) = 6.2142036$$

The first value follows from  $\lambda(4, 3) = 3.18\dots$  [4] and inequality (*j*2) of [3], upon taking  $j = 2$  and  $\theta = 0.1453509106$ . The second value follows from the first together with inequality (*k*−2) and the proof of Theorem 4.3 of [3], where we take  $\theta = 2/11$ . The first three lines of Table 2 should read

<i>h</i>	<i>k</i>	<i>s</i>	<i>a</i>	$\theta$	$\nu(h, k, s)$	$\alpha(h, k, s)$	$\alpha_1(h, k, s)$	$\alpha_2(h, k, s)$
3	4	2	1/3	0.0789292	2.6578584	0.7807138	0.7777777	0.7745321
	4	3	1/4	0.1365431	3.7738185	0.9087271	0.8839482	0.9047771
	4	4	1/4	0.1805181	5.0609926	0.9796691	0.9464191	0.9732245

None of these entries was used in any of the theorems proved in [1].

REFERENCES

- [1] K. B. Ford, *The representation of numbers as sums of unlike powers, II*, J. Amer. Math. Soc. **9** (1996), 919–940.
- [2] M. I. Israilov and I. A. Allakov, Proceedings of the Steklov Inst. of Math., Issue 6 (1995), 155–161.
- [3] R. C. Vaughan, *A new iterative method in Waring’s problem*, Acta Math. **162** (1989), 1–71.
- [4] ———, *A new iterative method in Waring’s problem, II*, J. London Math. Soc. (2) **39** (1989), 219–230.

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