

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

KEVIN B. FORD

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 (j2) 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

| h | k | s | a | θ | $\nu(h, k, s)$ | $\alpha(h, k, s)$ | $\alpha_1(h, k, s)$ | $\alpha_2(h, k, s)$ |
|-----|-----|-----|-----|-----------|----------------|-------------------|---------------------|---------------------|
| 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].

Lastly, in (3.3) on p. 924 and (3.6) on p. 925, the 2^k appearing in the argument of f_k should be replaced with 2^h .

REFERENCES

- [1] K. B. Ford, *The representation of numbers as sums of unlike powers. II*, J. Amer. Math. Soc. **9** (1996), 919–940. MR **97g**:11111
- [2] M. I. Israilov and I. A. Allakov, *On the sum of the k th powers of natural numbers*, Trudy Mat. Inst. Steklov **207** (1994), 172–179 (Russian); English transl. in Issue 6 **207** (1995) 155–161. MR **98b**:11105
- [3] R. C. Vaughan, *A new iterative method in Waring’s problem*, Acta Math. **162** (1989), 1–71. MR **90c**:11072
- [4] ———, *A new iterative method in Waring’s problem, II*, J. London Math. Soc. (2) **39** (1989), 219–230. MR **90c**:11074

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF SOUTH CAROLINA, COLUMBIA, SOUTH CAROLINA 29208

E-mail address: ford@math.sc.edu

Received by the editors May 5, 1999.
 1991 *Mathematics Subject Classification*. Primary 11P05.