

Erratum

Volume 26, Number 3 (1987), in the article “Solving Exponential Diophantine Equations Using Lattice Basis Reduction Algorithms,” by B. M. M. de Weger, pages 325–367: The following remarks should be added.

1. Reference [1, Sect. 5] is based on Lemma 2.2, given on pp. 328–329, which is due to Van der Poorten. We added a footnote in proof (p. 329), stating that Yu has reached an improvement of the constants. Moreover, it turned out that Van der Poorten’s proofs contain some gaps. Yu’s results have been published in [3].

In the monograph [2, Chap. 6], the author has again performed all computations based on Lemma 2.2, using Yu’s improved result. Since the constants of Yu are much better than those of Van der Poorten, the proofs of Theorems 5.3 and 5.4 (by reducing upper bounds), as they are given in the paper (pp. 353–363), remain valid.

2. Professor Lianxiang Wang from Beijing, China, pointed out to me that in [1] in the three tables in Section 5D, on pp. 360–361, there appear incorrect values of the parameters $\gamma_1, \dots, \gamma_4$. It occurred to me that, due to an erroneous interpretation of the computer output, the γ_i appear with opposite signs. Since the computations were performed with the correct values of the γ_i , this error does not affect the proof of Theorem 5.4. Below we give the relevant parts of the three tables mentioned, with the correct values of the γ_i . The author is grateful to Professor Wang for checking the computations and thereby detecting the error.

Corrections to the first table on p. 360:

p	m	γ_0	γ_1	γ_2	γ_3	γ_4
2	1320					
3	840					
5	600	2	1	0	0	1
7	480	3	0	0	1	-1
11	360	5	2	1	-2	0
13	360	6	3	-1	2	-1

Corrections to the first and second tables on p. 361:

p	m	γ_0	γ_1	γ_2	γ_3	γ_4
2	77					
3	49					
5	35	2	0	1	1	0
7	28	3	0	1	-1	0
11	21	5	-1	-1	-1	2
13	21	6	0	0	-1	-2

p	m	γ_0	γ_1	γ_2	γ_3	γ_4
2	55					
3	35					
5	25	2	1	1	1	0
7	20	3	-1	1	-1	0
11	15	5	-1	-2	2	2
13	15	6	-1	0	3	-2

REFERENCES

1. B. M. M. DE WEGER, Solving exponential Diophantine equations using lattice basis reduction algorithms, *J. Number Theory* **26** (1987), 325–367.
2. B. M. M. DE WEGER, “Algorithms for Diophantine Equations” (C. W. I. Tract, Ed.), Centre for Mathematics and Computer Science, Amsterdam, to appear.
3. K. R. YU, “Linear Forms in the p -adic Logarithms,” Report MPI/87–20, Max Planck Institut für Mathematik, Bonn, to appear in *Acta Arith.*