

Erratum: “Unique range sets in positive
characteristic,” *Acta Arithmetica* 103 (2002),
pp. 169–189

Abdelbaki Boutabaa, William Cherry, and Alain Escassut

June 26, 2002

Ta Thi Hoi An was kind enough to point out to us an error in [1]. Theorem 3.1 is false as stated. The condition (A2) must be replaced by the stronger assumption: (A2) $(n, m) = 1$. Thus, we need n and m relatively prime in either version of the theorem. Our mistake is on page 187. From the formula,

$$g^{n-m} = a \frac{h^m - 1}{h^n - 1},$$

we conclude that if h is constant, then g must also be constant. Of course, the other possibility is that h is simultaneously an n and m -th root of unity. But, if n and m are relatively prime, then there are no non-trivial n -th roots of unity which are also m -th roots of unity, and our proof is correct in that case.

Fortunately, our main application of Theorem 3.1, namely showing there exist unique range sets of all finite cardinalities ≥ 4 in all characteristics, remains valid. That is because in all of our applications of Theorem 3.1, *e.g.*, Corollary 3.2, it was always the case that $(n, m) = 1$.

References

- [1] A. BOUTABAA, W. CHERRY, AND A. ESCASSUT, *Unique range sets in positive characteristic*, *Acta Arith.* **103** (2002), 169–189.

Laboratoire de Mathématiques Pures
Université Blaise Pascal (Clermont-Ferrand)
Les Cézeaux
63177 AUBIERE CEDEX
FRANCE
E-mail: boutabaa@math.univ-bpclermont.fr

Department of Mathematics
University of North Texas
Denton, TX 76203
USA
E-mail: wcherry@unt.edu

Laboratoire de Mathématiques Pures
Université Blaise Pascal (Clermont-Ferrand)
Les Cézeaux
63177 AUBIERE CEDEX
FRANCE
E-mail: escassut@math.univ-bpclermont.fr