

ERRATA:
HYPERGEOMETRIC DECOMPOSITION OF SYMMETRIC $K3$
QUARTIC PENCILS

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This note gives errata for the article *Hypergeometric decomposition of symmetric $K3$ quartic pencils* [1]. Thanks to Thais Gomes Ribeiro.

ERRATA

- (1) Remark 3.1.2: last sentence should be replaced by “Accordingly, we will analyze below how our definition of finite field hypergeometric functions depends on these choices.”
- (2) Before Definition 3.1.10: unless the field of definition is $K_{\alpha, \beta} = \mathbb{Q}$, there is a dependence on the choice of ω . So it is only independent of the choice of character Θ in general.
- (3) After Definition 3.1.10, replace paragraph with “Suppose that α, β is defined over \mathbb{Q} , i.e., $K_{\alpha, \beta} = \mathbb{Q}$. Then $H_q(\alpha, \beta | t)$ is independent of the choice of character ω again applying Remark 3.1.2 (more generally, see below).”
- (4) Proposition 3.2.8(a): add “if $K_{\alpha, \beta} = \mathbb{Q}$ ”.
- (5) Before Lemma 3.2.10: $\zeta(q^\times)$ should be ζ_{q^\times} .
- (6) Proof of Lemma 3.2.10(a): note this this argument more generally shows what happens if we replace ω by ω^k .
- (7) §3.3: the coefficients $a_i \in \mathbb{F}_q^\times$ should be nonzero (without loss of generality, or we should extend the character to take the value 0).
- (8) After (3.3.1): μ_q^\times should be μ_{q^\times} .
- (9) After (3.3.1) and Proof of Theorem 3.3.3: $\mu(q^\times)^r$ should be $(\mu_{q^\times})^r$.
- (10) In the reference [FG51], the last name is “Furtado Gomide”.
- (11) Lemma 4.1.9(a): note that $L_p(H(\alpha; \beta | t), M, T)$ is also independent of the choice of multiplicative character (using the proof of Lemma 3.2.10).

REFERENCES

- [1] Charles F. Doran, Tyler L. Kelly, Adriana Salerno, Steven Sperber, John Voight, and Ursula Whitcher, *Hypergeometric decomposition of symmetric $K3$ quartic pencils*, Res. Math. Sci. **7**:7 (2020), 81 pages.