Report .1

Theta functions, Kronecker functions and bilinear relations

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1 Introduction

Theorem 1 (Decomposition for Genus-Zero)**.** *Let f be a meromorphic function on $\mathbb{C}$. Let z_i be its zeros with multiplicity n_i and q_j be the poles with multiplicity p_j. Then, there exists a constant $C \in \mathbb{C}$ such that*

$$f(z) = \frac{\prod_i (z - z_i)^{n_i}}{\prod_j (z - q_j)^{p_j}} \tag{.1|1}$$

[Cha22] [Ber10]

2 Background

3 Main theorem

3.1 Preconditions

3.2 Boundary conditions

3.3 Proof

4 Outlook & open questions

Bibliography

[Ber10] Marco Bertola. Riemann surfaces and theta functions mast 661 g / mast 837. 2010.

[Cha22] Zhi Cong Chan. Towards a higher-genus generalization of the kronecker function using schottky covers. 2022.