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On Algebraic Equations Satisfied by Hypergeometric Correlators in WZW Models. I.

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Abstract. It is proven that integral expressions for conformal correlators in sl(2) WZW model found in [SV] satisfy certain natural algebraic equations. This implies that the above integrals really take their values in spaces of conformal blocks.

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1. Introduction

Let \mathbb{P}^1 be a complex projective line with a fixed coordinate z, $\mathbb{A}^1 = \mathbb{P}^1 - \{\infty\}$. Let \mathfrak{g} be a complex simple Lie algebra with a fixed invariant scalar product (,) defining the symmetric invariant tensor $\Omega \in \mathfrak{g} \otimes \mathfrak{g}$, L_1, \ldots, L_{n+1} its irreducible representations. Set

$$W = (L_1 \otimes L_2 \otimes \cdots \otimes L_{n+1})_{\mathfrak{q}}.$$

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