Some problems around $SL_2(C)$

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Let G be a group and let F_n be a free group of the rank n. For a word $w \in F_n$ the word map $\tilde{w}: G_n \to G$ is defined by the formula $\tilde{w}((g_1, \ldots, g_n)) = w(g_1, \ldots, g_n)$. During the last 10-15 years the theory of word maps are intensively developed especially for the case when G is a simple algebraic group. Here we consider some problems of the theory of word maps and related questions for the case when $G = SL_2(C)$

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