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Steinmann Relations and the Two-Loop MHV Amplitude in Eight-Particle Kinematics

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Abstract: We present the full functional form of the two-loop eight-point MHV amplitude in the planar limit of maximally supersymmetric Yang-Mills theory, in terms of cluster polylogarithms. We also compute the two BDS-like ansätze that can be formulated in eight-particle kinematics, and find that ...

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1 Introduction

2 Promoting $R_8^{(2)}$ from Symbol to Function

Briefly describe the method outlined in [**?**] for upgrading the n-point two-loop MHV symbol to a function.

3 The Functions $R_8^{(2)}$, ${}^3\mathcal{E}_8^{(2)}$, and ${}^4\mathcal{E}_8^{(2)}$

Work out the BDS-like ansätze that preserve the Steinmann relations between the three-particle and four-particle Mandelstam invariants, respectively. Check that