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On the recent proof of the Shareshian–Wachs conjecture

On October 6th, 2026, OpenAI released solutions to hundreds of problems in pure mathematics. Manuscript number 169 proved the well-known Shareshian–Wachs Conjecture. This problem asked for a q-analogue of the Stanley–Stembridge Conjecture (now Hikita's Theorem) regarding e-positivity of the chromatic symmetric function associated to a natural unit interval graph. We will give a high-level overview of the proof, which connects the problem to the Θ-basis of Gross–Hacking–Keel–Kontsevich in certain scattering diagram cluster algebras, together with a q-analogue of that theory due to Davison–Mandel. We will also discuss the ongoing community response to these developments.