Chapter 1

Questions to think about

Chapter 2

Survey

2.1 T-systems, networks and dimers [DF14]

2.1.1 Excerpts

- In the case of type A, the T-system equation is also known as the octahedron recurrence, and appears to be central in a number of combinatorial objects, such as the lambda-determinant and the Alternating Sign Matrices [24][8], the puzzles for computing Littlewood-Richardson coefficients [20], generalizations of Coxeter-Conway frieze patterns [5][1][3], and the domino tilings of the Aztec diamond [12][25]

2.2 Q-systems as Cluster Algebras II: Cartan Matrix of Finite Type and the Polynomial Property [FK09]

A new interpretation for the T-system arose from realizing that the corresponding discrete evolution could be viewed as a particular mutation in a suitably defined cluster algebra

2.3 Arctic curves of the octahedron equation [DFSG14]

2.4 Double-dimers, the Ising model and the hexahedron recurrence [KP13]

2.5 Perfect Matchings and the Octahedron Recurrence [Spe04]

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