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# Quantum integrable model of an arrangement of hyperplanes

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## SUMMARY

A quantum integrable model is a vector space and an interesting collection of commuting linear operators called Hamiltonians. An example is the Gaudin model on a multiplicity space of a tensor product of representations over a simple Lie algebra. The problem is to construct eigenvectors and eigenvalues of the Hamiltonians and describe the algebra of Hamiltonians by generators and relations.

We assign a quantum integrable model to a weighted arrangement of hyperplanes. Such a model comes together with eigenvalues, eigenvectors of Hamiltonians and with generators and relations in the algebra of Hamiltonians. For suitable arrangements the corresponding quantum integral model is isomorphic to the quantum Gaudin model.

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