THE CORRELATION FUNCTION IN THE 2D ISING MODEL ON A CYLINDER

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The Ising model on a two dimensional lattice with one infinite and other finite, equal to N, dimensions is considered. The exact solution for the pair correlation function in the case of an arbitrary disposition of correlating spins on the cylinder is expressed through the form factor expansions both for the ferro- and paramagnetic regions of the coupling parameter. The two-point correlators in finite-row Ising chains are calculated by the transfer matrix method in the case of small $N \leq 6$. It is shown that the transfer matrix results coincide with the form factor ones.