Finite size Emptiness Formation probability for the XXZ spin chain at $\Delta=-1/2$

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At the beginning of this century, Razumov and Stroganov have noticed that the wavefunction of the ground state of the XXZ spin chain at $\Delta=-\frac{1}{2}$ (a physical system whose study has a long history), displays several enumerations related to different classes of Alternating Sign Matrices (ASM) and more generically has a rich combinatorial structure. After recalling some of the main conjectures of R--S, we show how to exploit the relation between the solution of the level 1 $\displaystyle{U_q(\hat{sl_2})}$ qKZ equation and the ground state of the inhomogeneous XXZ spin chain at $\Delta=-\frac{1}{2}$ in order to compute the exact Emptiness Formation Probability (EFP) of a periodic chain of finite length. The EFP turns out to have a "nice"
factorized form and in certain cases reduces to enumerations of ASM or of certain symmetry classes of Plane Partitions.