Homework

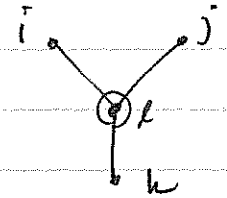
① Show that $Y_\Lambda(K) = Y_{\tilde{\Lambda}}(\tilde{K})$

for a general $K = (K_e)_{e \in E(\Lambda)}$.

② in triangular lattice $\overset{\text{dual}}{\longleftrightarrow}$ hexagonal lattice

$\downarrow$ RG

triangular lattice.



Find an equation that determines $\tilde{K}'$

s.t. $$\sum_{\sigma_\ell} e^{\tilde{K}(\sigma_i\sigma_\ell + \sigma_j\sigma_\ell + \sigma_k\sigma_\ell)} = z\, e^{\tilde{K}'(\sigma_i\sigma_j + \sigma_j\sigma_k + \sigma_k\sigma_i)}.$$

Show that $K = \tilde{K}'$ determines

$$K_c = \frac{1}{2}\log\sqrt{3} \quad \left(\text{i.e. } e^{2K_c} = \sqrt{3} \right)$$