$$\sum_a v_a' = \sum_a \sum_b P_{ab} v_b = \sum_b v_b \sum_a P_{ab} = \sum_b v_b = 1 + \frac{1}{2}$$

Consider the system with Hamiltonian

$$\hat{H} = -\frac{\omega_0}{2}\hat{\sigma}_z + \omega_1 \cos(\omega t)\hat{\sigma}_x$$

$$e^{-i\omega t/2}\alpha(t) = \cos\left(\frac{\Omega t}{2}\right) - i\frac{\Delta}{\Omega}\sin\left(\frac{\Omega t}{2}\right),$$
$$e^{i\omega t/2}\beta(t) = -i\frac{\omega_1}{\Omega}\sin\left(\frac{\Omega t}{2}\right),$$

$$|\psi\rangle = \alpha(t)|0\rangle + \beta(t)|1\rangle$$

$$e^{i\omega t/2}\beta(t) = -i\frac{\omega_1}{\Omega}\sin\left(\frac{\Omega t}{2}\right)$$

$$F^{k+1}(v_j) = \min_{\text{neighbourhood } v_j} F()$$

$$J'(v) = 1 + \min\nolimits_A J(Av)$$

$$\langle\psi|\psi\rangle = T_{[1]}{}^a{}_b = T_{[1]}{}^b{}_c \ldots = \mathrm{tr}(T^N) = \sum_j (t_j)^N \to /N \to \infty / t_1^N = 1,$$

with t_j the eigenvalues of the transfer matrix and t_1 is the largest one of these, so $t_1 = 1$.

$$|\psi_{AB}\rangle = |0\rangle \otimes (|0\rangle + |1\rangle)$$

$$|\psi_{AB}\rangle = \frac{1}{2}\left(|00\rangle + |10\rangle - |01\rangle - |11\rangle\right)$$

$$|\psi_{AB}\rangle = \sum_a \sum_b \psi_{ab}|ab\rangle = \sum_a \sum_b \frac{1}{2}\begin{pmatrix}1 & -1\\ 1 & -1\end{pmatrix}_{ab}|ab\rangle$$

$$\frac{1}{\sqrt{2}}\begin{pmatrix}1 & .\\ 1 & .\end{pmatrix}\begin{pmatrix}1 & 0\\ 0 & 0\end{pmatrix}\frac{1}{\sqrt{2}}\begin{pmatrix}-1 & .\\ 1 & .\end{pmatrix} = \frac{1}{2}\begin{pmatrix}1 & -1\\ 1 & -1\end{pmatrix}$$