$$p_{h=1} = \phi\left(\begin{pmatrix} w_{11} & \cdots & w_{N_v 1} \\ \vdots & \ddots & \vdots \\ w_{1N_h} & \cdots & w_{N_v N_h} \end{pmatrix} \begin{pmatrix} v_1 \\ \vdots \\ v_{N_v} \end{pmatrix}\right)$$