

$$\begin{pmatrix} 1 & 1 & 0 & \dots & -1 \\ 0 & -1 & 1 & \dots & 0 \\ 1 & 0 & 1 & \dots & -1 \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \vdots & \vdots & \vdots & \ddots & \vdots \end{pmatrix}$$