Matrix A:

$$A_{948\times948} = \begin{bmatrix} 7 & -1 & -1 & 0 & 0 & 0 & 0 & \cdots & 0 \\ -1 & 7 & -1 & -1 & 0 & 0 & 0 & \cdots & 0 \\ -1 & -1 & 7 & -1 & -1 & 0 & 0 & \cdots & 0 \\ 0 & -1 & -1 & 7 & -1 & -1 & 0 & \cdots & 0 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ 0 & 0 & \cdots & 0 & 0 & 0 & -1 & -1 & 7 \end{bmatrix}$$

Vector b:

$$b_{948\times1} = \begin{pmatrix} sin(1 \cdot 4) \\ sin(2 \cdot 4) \\ \vdots \\ sin(N \cdot 4) \end{pmatrix}$$