tridiagonal matrix

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An $n \times n$ *tridiagonal* matrix is of the form

$$\begin{bmatrix} d_1 & u_1 & 0 & 0 & \cdots & 0 \\ l_1 & d_2 & u_2 & 0 & \cdots & 0 \\ 0 & l_2 & d_3 & u_3 & \cdots & 0 \\ \vdots & \vdots & \ddots & \ddots & \ddots & \vdots \\ 0 & 0 & \cdots & l_{n-2} & d_{n-1} & u_{n-1} \\ 0 & 0 & \cdots & 0 & l_{n-1} & d_n \end{bmatrix}$$