



7.2 Exercises

7-1 Using the LU decomposition of stiffness matrix \mathbf{K} , compute the displacements:

$$\mathbf{K}\hat{\mathbf{u}} = \mathbf{f} \quad \text{with} \quad \mathbf{K} = \begin{bmatrix} 6 & 2 & 1 \\ 2 & 6 & 2 \\ 1 & 2 & 6 \end{bmatrix}, \quad \mathbf{f} = \begin{Bmatrix} 8 \\ 4 \\ 1 \end{Bmatrix}$$