

EX.2.2.4.b, Sauer3

Solve the system by finding the LU factorization and then carrying out the two-step back substitution

$$(b) \begin{pmatrix} 4 & 2 & 0 \\ 4 & 4 & 2 \\ 2 & 2 & 3 \end{pmatrix} \begin{pmatrix} x_0 \\ x_1 \\ x_2 \end{pmatrix} = \begin{pmatrix} 2 \\ 4 \\ 6 \end{pmatrix}$$

[Note 1](#): the LU factorization for this matrix was found in EX.2.2.2.b.

[Note 2](#): the two-step back substitution for this linear system of equations is done using Python in CP.2.2.2.b.