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## CP.4.3.5, Sauer3

Use **numpy** QR factorization to find the least squares solution and 2-norm error of the following inconsistent system:

(a) 
$$\begin{bmatrix} 1 & 1 \\ 2 & 1 \\ 1 & 2 \\ 0 & 3 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} 3 \\ 5 \\ 5 \\ 5 \end{bmatrix}$$
, (b)  $\begin{bmatrix} 1 & 2 & 2 \\ 2 & -1 & 2 \\ 3 & 1 & 1 \\ 1 & 1 & -1 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 10 \\ 5 \\ 10 \\ 3 \end{bmatrix}$ .