

Quiz 9

For the matrix below, find its LU factorization by following the indicated steps.

$$A = \begin{bmatrix} 3 & 3 & 2 & 11 & 6 \\ -3 & 1 & -2 & -1 & -5 \\ 15 & 9 & 10 & 30 & 6 \\ -9 & 1 & -6 & -2 & -5 \end{bmatrix}$$

1. (2 points) Set up the correct size and format of the matrices L and U.
2. (6 points) Compute the matrices L and U
3. (2 points) Verify that the matrices L and U you found in part 2 satisfy $A = L \cdot U$