

An LU Decomposition

This little homework is due this Friday, March 4. The idea is simple: Compute the LU decomposition of the following matrix:

$$\begin{pmatrix} -4 & 9 & 4 & 0 \\ -3 & -4 & 8 & 0 \\ 0 & -7 & -3 & -8 \\ -9 & 1 & -5 & -9 \end{pmatrix}$$

Note: You do *not* have to work out the arithmetic by hand. On the contrary, I encourage you to work with a computational tool. You *do* need to write out the results, including the intermediate steps, however.