Supplemental 1: Finish your code from question 19 of the worksheet on implementing LU decomposition with partial pivoting. Then use this code together with the course page `lsolve` and your own `usolve` to solve $A\mathbf{x} = \mathbf{b}$ where

$$A = \begin{pmatrix} 9 & 3 & 2 & 0 & 7 \\ 7 & 6 & 9 & 6 & 4 \\ 2 & 7 & 7 & 8 & 2 \\ 0 & 9 & 7 & 2 & 2 \\ 7 & 3 & 6 & 4 & 3 \end{pmatrix}$$

and $b = [35, 58, 53, 37, 39]^T$. For the record, the true solution is $x = [0, 1, 2, 3, 4]^T$.

Exercise 7.8: