1. Obtain the LU factorization \((A = LU)\) of the matrix shown on the right [try to use induction]. Compute \(\|U\|_1\) and \(\|U\|_\infty\).

What do you observe about \(\|U\|_\infty\) as a function of the size \(n\)? How do you relate this result to that seen in PrEx03?