Problem Q3.4. *Solution.* Since $A = LU$, $\det(A) = \det(LU)$. Since L is lower triangular, it is incredibly easy to find the determinant, and the same goes for U is it is upper triangular. This is because the top row of L and the bottom row of U each consists of only one nonzero entry. So you just multiply the determinants of L and U to find the determinant of A. Thus $\det(A) = [1(2-0)]\cdot[1(1-0)] = 2$.