contact email: donsen2 at hotmail.com

MATH221 04 problems Name, ID

1. If $L_1 U1 = L_2 U_2$ (upper triangular U's with diagonal, lower triangular $L's$ with unit diagonal) then $L_1 = L_2$ and $U_1 = U_2$. The LU factorization is unique.

(Optional) 2. True or False. If $v_1, \cdots v_4 \in \mathbb{R}^4$ and v_3 is not a linear combination of v_1, v_2, v_4 then $\{v_1, v_2, v_3, v_4\}$ is linearly independent.