

# Extra Homework 1 – Math 104B, Summer 2011

Due on Thursday, August 11th, 2011

Extra credit problems:

1. Show that the inverse of an invertible triangular (lower or upper) matrix is also triangular (of the same type).
2. Show that the product of two triangular (lower or upper) matrices is also triangular (of the same type).
3. Show that all permutation matrices are invertible and that the inverse of a permutation matrix  $P$  is its transpose  $P^T$ .