SCHUR’S INEQUALITY FOR THE DIMENSION OF COMMUTING FAMILIES OF MATRICES

N. S. KARAMZADEH

Abstract. We present an elementary proof for the above inequality. This in particular leads us easily to see that the maximal linearly independent sets of commuting $n \times n$ matrices, for $n \geq 4$, necessarily consist of either nilpotent elements or units.

Keywords and phrases: Schur’s inequality, commutativity.

REFERENCES