

QUIZ 3 CLASS 20

Linear Algebra I

Section:
Week 4

NAME & ID(Please print legibly)

PLEASE SHOW ALL YOUR WORK.

1. Prove that if A is symmetric and invertible, then A^{-1} is also symmetric.
2. The matrix

$$A = \begin{bmatrix} 2 & -2 \\ 2 & -2 \end{bmatrix}$$

is a “vector” in the space M of all 2 by 2 matrices. Write the zero vector in this space, the vector $\frac{1}{2}A$, and the vector $-A$. What matrices are in the smallest subspace containing A ?