## Elementary Linear Algebra - MATH 2250 - Quiz 11

## Name:

For the following problems, think of a basis first (you don't need to provide the basis).

- 1. What is the dimension of the space of all  $2 \times 2$  matrices?
- 2. What is the dimension of the space of all  $2 \times 2$  diagonal matrices?
- 3. What is the dimension of the space of all  $2 \times 2$  symmetric matrices.
- 4. Write a  $3 \times 4$  rank one matrix.