

MIDTERM 2 STUDY GUIDE

Techniques and Computations.

- Find a basis for the nullspace, row space, column space of a matrix, or for any other subspace.
- Calculate the rank or nullity of a matrix, or the dimension of any subspace.
- Find an orthogonal basis for a subspace.
- Find the matrix of a linear transformation, or the formula for a linear transformation.
- Find the least squares solution to a system of equations, including linear and quadratic fits.

Theory.

- Determine if a certain subset is a subspace.
- Determine if a certain function is a linear transformation.
- Know definitions: basis, dimension, orthogonal, linear transformation, subspace, linearly independent set, spanning set.
- Know what this chapter's theorems say.