MATH 2418

Exam 2 Reviews

3.1

Vector Spaces and Subspaces.

**Book**

Chapter main points

1. The standard n-dimensional space Rn contains all real column vectors with n components
2. If v and w are in a vector space S, every combination of cv + dw must be in S
3. The vectors in S can be matrices or functions of x. The one point space Z consists of x = 0
4. A subspace of Rn is a vector space inside Rn.
   1. Example. Line y = 3x in R2
5. The column space of A consists of all combinations of the columns of A: a subspace of Rm
6. The column space contains all the vectors Ax. So Ax = b is solvable when b is in C(A).

Facts

Rules

**Class**

**Recitation**