**Linear algebra - Midterm 2 review topics**

### Vector spaces

- Know, and be able to check on given examples, the definitions of "vector space", "subspace", "linear dependence", "linear independence", "basis", "dimension".
- Be able to find coordinate vectors of elements in a vector space relative to a basis.
- Know how to find the matrix representative of a linear transformation relative to given bases.

### Determinants

- Know the definition of the determinant of a square matrix, and its basic properties. In particular the formula $\det(AB) = \det(A)\det(B)$.
- Know how the determinant of a matrix changes when applying row or column operations. Using this be able to compute determinants.