

This homework is not to be handed in, but you need to be prepared to answer these questions in the next class.

1. Get definitions for the following terms.
  - (a) Linear combination.
  - (b) Linear map.
  - (c) Linear independent vectors from a vector space.
  - (d) Vector space.
  - (e) Basis for a vector space.
  - (f) Null space of a matrix.
  - (g) Range of a matrix.
  - (h) Eigenvector/eigenvalue of a matrix.
  - (i) Transpose of a matrix.
  - (j) Inverse of a matrix.
  - (k) Nonsingular matrix.
  - (l) Rank of a matrix.
  - (m) Determinant of a square matrix.
2. Understand matrix multiplication and develop the conventional triple-nested-loop algorithm for rectangular matrix multiplication.