

- How to solve systems of linear equations:
  - Gauss-Jordan elimination, matrix notation.
  - Need to know how to present solutions: unique, infinitely many (use parameters), or non-existent.
- Matrices
  - definition
  - definitions of equality, addition, scalar multiplication and multiplication
  - matrix transpose
  - properties of matrix operations
  - comparison of matrix arithmetic and usual (numeric) arithmetic
  - “simple” proofs using summation notation
- Invertibility and inverses
  - definition
  - computation of matrix inverse
- Determinants
  - definition and computation (expansion along a row or column)
  - relation to inverses and invertibility
  - properties of determinants and how they can be used to simplify computations
- Rank and row-reduced echelon form