

Algebra, 2018/19, sem.1, 15h (L), 30h (E)

Lectures

- 1.(8.10) Complex Numbers.
- 2.(22.10) Complex Numbers.
- 3.(5.11) Matrices. Operations on them. Inverse Matrix.
- 4.(19.11) Row Reduction and Echelon Forms. System of Linear Equations as a Vector Equation and as a Matrix Equation.
- 5.(3.12) The Span of a Set of Vectors. Linear Independence. Linear Transformations. The Matrix of a Linear Transformation.
- 6.(17.12) Eigenvectors and Eigenvalues of a Matrix.
- 7.(14.01) Similar Matrices. Diagonalization of a Matrix.

Exercises

- 1.(2.10) Algebraic Expressions. Roots of Polynomials.
- 2.(9.10) Complex Numbers. (Lecture!)
- 3.(16.10) Complex Numbers.
- 4.(23.10) Complex Numbers.
- 5.(30.10) Roots of complex numbers. Algebraic equations.
- 6.(6.11) Operations on Matrices.
- 7.(13.11) Determinant of a Matrix. Systems of Linear Equations. Cramer's Rule. (Lecture!)
- 8.(20.11) Cofactors and Laplace expansion. Determinants. Cramer's Rule.
- 9.(27.11) Test.
- 10.(4.12) Systems of Linear Equations. Row Reduction and Echelon Forms.
- 11.(11.12) The Inverse of a Matrix.
- 12.(18.12) Linear Independence. Linear Transformations. The Matrix of a Linear Transformation.
- 13.(8.01) Eigenvectors and Eigenvalues.
- 14.(15.01) Test.
- 15.(22.01) Diagonalization of a Matrix.