

Math 3A Syllabus

Text: *Linear Algebra and Its Applications*, David Lay

Lecture	Section	Topic
1	1.1	Systems of Linear Equations
2	1.2	Row Reduction and Echelon Forms
3	1.3	Vector Equations
4	1.4	The Matrix Equation $Ax=b$
5	1.5	Solution Sets of Linear Systems
6	1.6	Applications of Linear Systems
7	1.7	Linear Independence
8	1.7	Cont.
9	1.8	Introduction to Linear Transformations
10	1.9	The Matrix of a Linear Transformation
11	2.1	Matrix Operations
12	2.2	The Inverse of a Matrix
13	2.3	Characterizations of Invertible Matrices
14		Review
15		Midterm
16	2.8	Subspaces of \mathbb{R}^n
17	2.8, 2.9	Cont.
18	2.9	Dimension and Rank
19	3.1	Introduction to Determinants
20	3.2	Properties of Determinants
21	5.1	Eigenvectors and Eigenvalues
22	5.2	The Characteristic Equation
23	5.2, 5.3	Cont.
24	5.3	Diagonalization
25	5.4	Eigenvectors and Linear Transformations
26	6.1	Inner Product, Length, and Orthogonality
27	6.2	Orthogonal Sets
28		Review